UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

October 31, 2016

CERTIFIED MAIL –
RETURN RECEIPT REQUESTED

Mr. Robert MacDonald, Mayor
City of Lewiston
27 Pine Street
Lewiston, ME 04240

Re: EPA Request for Information, Pursuant to Section 308 of the Clean Water Act EPA Docket No. CWA- 308-R01-FY17-01

Dear Mr. MacDonald:

The United States Environmental Protection Agency ("EPA") audited the City of Lewiston's ("City") operations and maintenance of its sanitary sewer collection system on October 27 & 28, 2015. Subsequently, and as required by its Maine Pollutant Discharge Elimination System ("MEPDES") permit, the City has continued to report unauthorized Sanitary Sewer Overflows ("SSOs"). Based on a review of the audit findings and information provided by the City, EPA has developed follow-up questions and additional requests for information.

Section 308(a) of the federal Clean Water Act (the "Act"), 33 U.S.C.§ 1318(a), authorizes the EPA to require any owner or operator of a point source to provide information needed to determine whether there has been a violation of the Act. Accordingly, the City is hereby required, pursuant to Section 308(a) of the Act, 33 U.S.C. § 1318(a), to respond to this Request for Information (the "Request") in accordance with the schedules provided herein. Please read the instructions in Attachment No. 1 carefully before preparing your response and answer each question in Attachment No. 2 as clearly and completely as possible.

Your response to this Request must also be accompanied by a certificate that is signed and dated by the person who is authorized to respond to the Request. A Statement of Certification, Attachment No. 3, is attached to this letter. Provide the following information within 45 days of receipt of this letter unless otherwise specified.

Information submitted pursuant to this Request shall be ***sent both in hard copy and electronic copy*** by certified mail and shall be addressed as follows:

New England Region
5 Post Office Square Suite 100 (OES 04-04)
Boston, MA 02109-3912
Attn: Alex Rosenberg
rosenberg.alex@epa.gov

and an ***electronic copy only*** shall be sent to:

Maine Department of Environmental Protection SMRO
312 Canco Rd.
Portland, ME 04103
Attn: Stuart Rose
stuart.m.rose@maine.gov

Compliance with this Request is mandatory. Failure to respond fully and truthfully, or to adequately justify any failure to respond, within the time frame specified above, also constitutes a violation of the Clean Water Act subject to enforcement action, including the assessment of penalties. In addition, providing false, fictitious, or fraudulent statements or representations may subject you to criminal prosecution under 18 U.S.C. § 1001.

The City may assert a business confidentiality claim covering part or all of the information requested in the manner described by 40 C.F.R. § 2.203(b). All information claimed to be confidential should be contained on separate sheet(s) and should be clearly identified as "trade secret" or "proprietary" or "company confidential." These separate marked sheets should be submitted to EPA by hard copy or compact disc, and not by email. Information covered by such a claim will be disclosed by EPA only to the extent, and by means of the procedures, set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is received by EPA, the information may be made available to the public without further notice to you.

If you have questions regarding this Request, please contact Alex Rosenberg of my staff at 617-918-1709 or have your attorney contact Jeffrey Kopf, Senior Enforcement Counsel, at 617-918-1796.

Sincerely,

James Chow, Manager
Technical Enforcement Office
Office of Environmental Stewardship

Attachments

Cc: Kevin Gagne, City of Lewiston – Deputy Director of Water and Sewer
Dave Jones, City of Lewiston -- Director of Public Works
Alex Rosenberg, EPA Water Technical Unit
Stuart Rose, MEDEP

Attachment No. 1

Information Request

1. Please provide a separate narrative response to each and every question and subpart of a question set forth in this Request. Precede each answer with the text and the number of the question and the subpart to which the answer corresponds.

2. If any question cannot be answered in full, answer to the extent possible. If your responses are qualified in any manner, please explain.

3. Any documents referenced or relied upon by you to answer any of the questions in the Request must be copied and submitted to EPA with your response. All documents must contain a notation indicating the question and subpart to which they are responding. If the documentation that supports a response to one item duplicates the documentation that supports another item, submit one copy of the documentation and reference the documentation in subsequent responses

4. If information or documents not known or not available to the City as of the date of the submission of its response to this Request should later become known, or available to the City, the City must supplement its response. Moreover, should the City find at any time after the submission of its response that any portion of the submitted information is false or misrepresents the truth, the City must notify the EPA and the Maine Department of Environmental Protection ("MEDEP") of this fact as soon as possible and provide a corrected response.

Attachment No. 2
Respond to the Following

Provide the following information within 45 days of receipt of this letter unless otherwise specified:

I. SSO Audit Follow-up Questions

A. At the 2015 EPA SSO Audit (see attachment 5 for inspection report and appendices) the Inspection Team requested a pump station equipment inventory for all 16 pump stations. The City was unable to provide that inventory at the time of inspection, as it would have required pulling together information from many different sources. The City promised to send this information once it was able to compile it. As of the date of this letter, this information had not yet been received by the EPA. Please provide this information as part of the Capacity Management Operations and Maintenance ("CMOM") Self-Assessment requested below.

B. According to the City's 2015 Operations and Maintenance Plan, the City's GIS Coordinator imports CCTV inspections data into the Infrastructure Technologies software I.T.pipes and GIS module, and in that way keeps the GIS system up-to-date. That data is then available to Sewer operations Supervisors and Engineering Division staff to evaluate and determine if additional maintenance and rehabilitation activities are required for sanitary sewer pipes. During the EPA inspection, the City explained that this process began in 2013 and that it was working towards having the GIS module be the master database for all sewer-related information. Explain how information related to sewer condition (structural and O&M) is currently accessed by supervisors, engineers and in-field staff. Also explain how this information is used in the context of O&M and asset management planning.

C. During the 2015 EPA audit, the City explained how it had just begun to utilize a computerized maintenance management system (CMMS), EGov, but that the system was an unreliable source for cataloging field-related activities and that it was only being used for tracking the progress of work orders and not for post-event analysis or planning. Describe if the City is currently able to utilize CMMS data for post-event analysis and or planning purposes. If the City is not yet able to do this, explain what plans the City has to enable the use of CMMS data for O&M and asset management planning.

D. The City provided EPA with budgeted capital expenditures forms for FY16 through FY20 which included for 2016, $1 million per year for rehabilitation of old sanitary sewer mains, $265,000 for sewer main inspections, $50,000 per year for inflow/infiltration removal, plus additional funds for pump station improvements, and equipment replacement. Provide a summary of the expenses-to-date that have been spent by the City for FY16 for each of these categories. Also provide the total length (in linear feet) of sewer pipe that has been rehabilitated and inspected for the reported amount of expenses incurred.

E. The City's Sewer Rehabilitation Capital Improvement Plan (CIP) states that recent inspections show that a substantial amount of the City's old sewer mains and pipes, for which there are an estimated 45 miles, need replacement and or rehabilitation. The plan estimates that this work will cost approximately $53 Million dollars. Explain what portion of rehabilitation or replacement work is going to be completed during the current five year CIP plan (estimated expenditures of approximately $1 million per year).

F. In the list of sewer back-ups generated from the City's EGov database (see Appendix D – Exhibit 4 of the attached inspection report) there are some entries in the column labeled *Issue/Problem Location Street Name* that include an asterisk. Please provide an explanation of what the asterisk signifies about the entry.

II. CMOM Self-Assessment

A. The City must submit an assessment of the City's Collection System operation and maintenance practices (the "CMOM Program Assessment"). As part of the CMOM Program Assessment, the City shall determine whether improvements to the City's preventative maintenance practices are necessary in order to preserve the infrastructure of the Collection System to prevent future spills, overflows, and releases from the Collection System. The CMOM Program Assessment shall be conducted in accordance with EPA's Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (EPA 305-B-05-002, January 2005) (which is available on-line at https://www3.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf). As part of the CMOM Program Assessment, the City shall complete and submit the Wastewater Collection System CMOM Program Assessment Checklist (the CMOM Program Self-Assessment Checklist) (see Attachment No. 4), which is a Region 1 modification of the checklist that accompanies the above-referenced guidance.

III. Collection System Continuous Flow Monitoring

A. The City's most recent CSO Long Term Control Plan states that 95% of the City's sanitary sewer system has been separated from stormwater sewer influents. Within the remaining 5% of combined sewer system, what are contributing causes of excessive flows (i.e. proportion of infiltration versus inflow, and type of inflow and or infiltration). Explain what information the City has to justify the information included in this response.

B. Under what climatic conditions does the City currently experience CSOs and SSOs.

C. The City communicated to EPA during the 2015 audit that block-test observations and or flow model results are methods utilized to determine the frequency and magnitude of a portion of the City's SSOs (including dry-weather CSOs, manhole overflows and basement back-ups). In order to improve the level of precision and accuracy regarding the City's sanitary sewer collection system flow characterization and ultimately to comply with the City's MEPDES permit requirements that prohibit all dry-weather overflows, submit a Monitoring Plan to EPA and MEDEP for approval, to install continuous monitoring devices to quantify and record authorized and unauthorized bypasses from the

sewage collection system. The Monitoring Plan[1] must include an implementation schedule and at a minimum, the following elements:

1. An identification of monitoring and modeling goals and objectives including but not limited to:

    a. Increase accuracy and completeness of SSO and CSO discharge reports;

    b. Gain the ability to more accurately assess hydraulic response of sanitary sewer conveyance system to varying rainstorm events throughout a majority of sewer subsections; and

    c. Validate or determine the need to update/revise the City's existing collection system hydraulic model by reassessing its accuracy.

2. A description of the installation of continuous monitoring devices at CSO outfalls and other in-system locations that together represent the system as a whole based on elements such as drainage area flow contributions, land use and or sensitive receiving waters. Monitoring devices must be installed in a manner that will be able to measure the date and time of bypass occurrences and the volume of a bypass, while factoring out tidal influence if applicable. Monitoring locations within the plan must include the CSO weir or gate structures listed below:

    a. Outfall 003
    b. Outfall 024
    c. Outfall 017
    d. Outfall 026
    e. Outfall 015
    f. Outfall 005

3. A protocol for precipitation data gathering and analysis to ensure data used to model or calculate flows is representative for any outfalls that are not planned to be continuously monitored;

4. Procedures for the City's analysis of flow monitoring data on an annual basis to match data, information needs and available resources for future sewage pollution control projects; and

5. An implementation schedule that upon approval by EPA and MEDEP, shall be implemented.

D. Submit a report to EPA and MEDEP by no later than October 1, 2017, and again on or no later than March 1, 2018, that includes the following information for the previous calendar year:

[1] EPA guidance on the development of monitoring plans is available within the CSO Guidance for Monitoring and Modeling (EPA publication #832-B-99-002).

1. Activation history and discharge volume for each CSO and SSO locations organized chronologically by outfall and then street name. Justification for any discharge monitoring results which upon analysis are considered false positives (in these cases references must be made to precedent precipitation, tide levels and other applicable factors);

2. Daily precipitation records including total rainfall and peak intensity;

3. A single map that includes all active CSO locations, and locations of any SSOs from the previous calendar year; and

4. A table containing all CSO and other flow monitoring device locations, their receiving water, control structure elevation, type of tide gate (if applicable), the date when monitoring began and the date monitoring ended.

End of Questions

Attachment No. 3

Statement of Certification

I declare under penalty of perjury that I am authorized to respond on behalf of the City of Lewiston. I certify that the foregoing responses and information submitted were prepared under my direction or supervision and that I have personal knowledge of all matters set forth in the responses and the accompanying information. I certify that the responses are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

By_____
(Signature)

_____
(Printed Name)

_____
(Title)

_____
(Date)

Attachment 4

United States Environmental Protection Agency, EPA New England

Wastewater Collection System CMOM Program Self-Assessment Checklist Apr 08

Name of your system _____ **Date** _____

Put an "A" in the final column for an issue you intend to address with future action, or leave blank if you have evaluated your program as sufficient.

I. General Information – Collection System Description

I	Question	Response	*Act
1	How many people are served by your wastewater collection system?		
2	What is the number of service connections to your collection system? How many: Manholes? Pump stations? Feet (or miles) of sewer? Force mains? Siphons?		
3	What is the age of your system (e.g., 30% over 30 years, 20% over 50 years, etc.)?		
4	What type(s) of collection system map is/are available and what percent of the system is mapped by each method (e.g., paper only, paper scanned into electronic, digitized, interactive GIS, etc.)? When was the map(s) last updated?		
5	If you have a systematic numbering and identification method/system established to identify sewer system manhole, sewer lines, and other items (pump stations, etc.), please describe.		
6	Are "as-built" plans (record drawings) or maps available and used by field crews in the office and in the field?		
7	Describe the type of asset management (AM) system you use (e.g. card catalog, spreadsheets, AM software program, etc.)		

II. Continuing Sewer Assessment Plan

II	Question	Response	*Act
1	Under what conditions, if any, does the collection system overflow? Does it overflow		

* Put an "A" in the final column if this is an issue you intend to address with future action.

	during wet and/or dry weather? Has your system had problems with: hydraulic issues, debris, roots, Fats, Oils & Grease (FOG), vandalism blockages resulting in manhole overflows, basement backups, other (specify)? Describe your system's history of structural collapses, and PS or force main failures.		
2	How many SSOs have occurred in each of the last three calendar years? What is the most frequent cause?		
3	Of those SSOs, how many basement backups occurred in each of the last three calendar years? How are they documented?		
4	What is the ratio of peak wet-weather flow to average dry-weather flow at the wastewater treatment plant or municipal boundary for satellite collection systems?		
5	What short-term measures have been implemented or plan to be implemented to mitigate the overflows? If actions are planned, when will they be implemented?		
6	What long-term measures have been implemented or plan to be implemented to mitigate the overflows? If actions are planned, when will they be implemented?		
7	Describe your preventive maintenance program; how do you track it (e.g., card files, electronically, with specific software)?		
8	How do you prioritize investigations, repairs and rehabilitation? What critical and priority problem areas are addressed more frequently than the remainder of your system? How frequent are these areas evaluated?		
9	Are septage haulers required to declare the origin of their "load"? Are records of these declarations maintained? Do any of the declarations provide evidence of SSOs?		

* Put an "A" in the final column if this is an issue you intend to address with future action.

III.A. Collection System Management Organizational Structure

IIIA	Question	Response	*Act
1	Do you have an organizational chart that shows the overall personnel structure for collection system operations, including operation and maintenance staff? Please attach your chart.		
2	For which jobs do you have up-to-date job descriptions that delineate responsibilities and authority for each position?		
3	How many staff members are dedicated to collection system maintenance? Of those, how many are responsible for any other duties, (e.g., road repair or maintenance, O&M of the storm water collection system)?		
4	Are there any collection system maintenance position vacancies? How long has the position(s) been vacant?		
5	For which, if any, maintenance activities do you use an outside contractor?		
6	Describe any group purchase contracts you participate in.		

III.B. Collection System Management: Training

IIIB	Question	Response	*Act
1	What types of training are provided to staff?		
2	Is training provided in the following areas: general safety, routine line maintenance, confined space entry, □ MSDS □ lockout/tagout, biologic hazards, traffic control, record keeping, electrical and instrumentation, pipe repair, public relations, SSO/emergency response, pump station operations and maintenance, trench/shoring, other (describe)?		
3	Which training requirements are mandatory for key employees?		
4	How many collection system employees are certified (e.g, NEWEA certification program) and at what grade are they certified?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

III.C. Collection System Management: Communication and Customer Service

IIIC	Question	Response	*Act
1	Describe your public education/outreach programs (e.g., for user rates, FOG, extraneous flow, SSOs etc.)?		
2	What are the most common collection system complaints? How many complaints have you received in each of the past three calendar years?		
3	Are formal procedures in place to evaluate and respond to complaints?		
4	How are complaint records maintained (i.e., computerized)? How are complaints tied to emergency response and operations and maintenance programs?		

III.D. Collection System Management: Management Information Systems

IIID	Question	Response	*Act
1	How do you manage collection system information? (Commercial software package, spreadsheets, data bases, SCADA, etc). What information and functions are managed electronically?		
2	What procedures are used to track and plan collection system maintenance activities?		
3	Who is responsible for establishing maintenance priorities? What records are maintained for each piece of mechanical equipment within the collection system?		
4	What is the backlog for various types of work orders?		
5	How do you track emergencies and your response to emergencies? How do you link emergency responses to your maintenance activities?		
6	What written policies/protocols do you have for managing and tracking the following information: complaint work orders, scheduled work orders, customer service, scheduled preventative maintenance, scheduled inspections, sewer system inventory, safety incidents, emergency		

* Put an “A” in the final column if this is an issue you intend to address with future action.

	responses, scheduled monitoring/sampling, compliance/overflow tracking, equipment/tools tracking, parts inventory?		

III.E. Collection System Management: SSO Notification Program

IIIE	Question	Response	*Act
1	What are your procedures, including time frames, for notifying state agencies, health agencies, regulatory authorities, and the drinking water authorities of overflow events?		
2	Do you use the state standard form for recording/reporting overflow events? If not, provide a sample copy of the form that is used.		

III.F. Collection System Management: Legal Authority

IIIF	Question	Response	*Act
1	Are discharges to the sewer regulated by a sewer use ordinance (SUO)? Does the SUO contain procedures for controlling and enforcing the following: FOG; Infil-tration/Inflow (I/I); building structures over the sewer lines; storm water connections to sanitary lines; defects in service laterals located on private property; sump pumps?		
2	Who is responsible for enforcing various aspects of the SUO? Does this party communicate with your department on a regular basis?		
3	Summarize any SUO enforcement actions/activities that have occurred in the last three calendar years.		
4	Do you have a program to control FOG entering the collection system? If so, which of the following does it include: permits, inspectio enforcement? Are commercial grease traps inspected regularly and who is responsible for conducting inspections?		
5	Is there an ordinance dealing with storm water connections or requirements to remove storm water connections?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

6	Does the collection system receive flow from satellite communities? Which communities? How are flows from these satellite communities regulated? Are satellite flow capacity issues periodically reviewed?		
7	Does the collection system receive flow from private collection systems? If yes, how is flow from these private sources regulated? How are overflows dealt with?		

IV.A. Collection System Operation: Financing

IV A	Question	Response	*Act
1	Has an enterprise (or other) fund been established and what does it include: wastewater collection and treatment operations; collection system maintenance; long-term infrastructure improvements; etc.? Are the funds sufficient to properly fund future system needs?		
2	How are rates calculated (have you done a rate analysis)? What is the current sewer charge rate? When was it last increased? How much was the increase?		
3	What is your O&M budget?		
4	If an enterprise fund has not been established, how are collection system maintenance operations funded?		
5	Does a Capital Improvement Plan (CIP) that provides for system repair/replacement on a prioritized basis exist? What is the collection system's average annual CIP budget?		
6	How do you account for the value of your system infrastructure for the Government Accounting Standards Board standard 34 (GASB 34)?		

* Put an "A" in the final column if this is an issue you intend to address with future action.

IV.B. Collection System Operation: Hydrogen Sulfide Monitoring and Control

IV B	Question	Response	*Act
1	Are odors a frequent source of complaints? How many have been received in the last calendar year?		
2	Do you have a hydrogen sulfide problem, and if so, do you have corrosion control programs? What are the major elements of the program?		
3	Does your system contain air relief valves at the high points of the force main system? How often are they inspected? How often are they exercised?		

IV.C. Collection System Operation: Safety

IV C	Question	Response	*Act
1	Do you have a formal Safety Training Program? How do you maintain safety training records?		
2	Which of the following equipment items are available and in adequate supply: □ rubber/disposable gloves; □ confined space ventilation equipment; □ hard hats, □ safety glasses, □ rubber boots; □ antibacterial soap and first aid kit; □ tripods or non-entry rescue equipment; □ fire extinguishers; □ equipment to enter manholes; □ portable crane/hoist; □ atmospheric testing equipment and gas detectors; □ oxygen sensors; □ H2S monitors; □ full body harness; □ protective clothing; □ traffic/public access control equipment; □ 5-minute escape breathing devices; □ life preservers for lagoons; □ safety buoy at activated sludge plants; □ fiberglass or wooden ladders for electrical work; □ respirators and/or self-contained breathing apparatus; □ methane gas or OVA analyzer; □ LEL metering?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

IV.D. Collection System Operation: Emergency Preparedness and Response

IV D	Question	Response	*Act
1	Do you have a written collection system emergency response plan? When was the plan last updated? What departments are included in your emergency planning?		
2	Which of the following issues are considered: □ vulnerable points in the system, □ severe natural events, □ failure of critical system components, □ vandalism or other third party events (specify), □ other types of incidents (specify)?		
3	How do you train staff to respond to emergency situations? Where are responsibilities detailed for personnel who respond to emergencies?		
4	How many emergency calls have you had in the past calendar year?		

IV.E. Collection System Operation: Engineering – Capacity

IV E	Question	Response	*Act
1	How do you evaluate the capacity of your system and what capacity issues have you identified, if any? What is your plan to remedy the identified capacity issues?		
2	What procedures do you use to determine whether the capacity of existing gravity sewer system, pump stations and force mains are adequate for new connections? Who does this evaluation?		
3	Do you charge hook up fees for new development and if so, how are they calculated?		
4	Do you have a hydraulic model of your collection system? Is it used to predict the effects of system remediation and new connections?		

IV.F. Collection System Operation: Pump Stations - Inspection

IV F	Question	Response	*Act
1	How many pump stations are in the system? How often are		

* Put an “A” in the final column if this is an issue you intend to address with future action.

	pump stations inspected? How many are privately owned, and how are they inspected? Do you use an inspection checklist?		
2	Is there sufficient redundancy of equipment at all pump stations?		
3	How are pump stations monitored? If a SCADA system is used, what parameters are monitored?		
4	How many pump station/force main failures have you had in each of the last three years? Who responds to pump station/force main failures and overflows? How are the responders notified?		
5	How many pump stations are equipped with backup power sources? How many require portable generators? How many portable generators does your system own? Explain how the portable generators will be deployed during a system-wide electrical outage.		
6	Are operation logs maintained for all pump stations? Are the lead, lag, and backup pumps rotated regularly?		
7	Is there a procedure to modify pump operations (manually or automatically) during wet weather to increase in-line storage of wet weather flows?		

V.A. Equipment and Collection System Maintenance: Sewer Cleaning

V A	Question	Response	*Act
1	What is your schedule for cleaning sewer lines on a system-wide basis? At this frequency, how long will it take to clean the system? How are sewer cleaning efforts documented?		
2	How many linear miles of the collection system were cleaned in each of the past 3 calendar years?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

3	How do you identify sewer line segments that have chronic problems and should be cleaned more frequently? Is a list of these areas maintained and cleaning frequencies established?		
4	Approximately, how many collection system blockages have occurred during the last calendar year, and what were the causes?		
5	Has the number of blockages increased, decreased, or stayed the same over the past five years?		
6	What equipment is available to clean sewers? Is any type of cleaning contracted to other parties? If yes, under what circumstances?		
7	Do you have a root control program? Describe its critical components.		

V.B. Equipment and Collection System Maintenance: Maintenance Right-of-Way

V B	Question	Response	*Act
1	Is scheduled maintenance performed on Rights-of-Way and Easements? At what frequency? How many manholes in easement areas can not be located?		
2	Are road paving projects coordinated with the collection system operators. Are manholes paved over? How many manholes in paved areas can not be located? Describe any systems in place for locating and raising manholes that have been paved over.		

V.C. Equipment and Collection System Maintenance: Parts Inventory

V C	Question	Response	*Act
1	Do you have a central location for the storage of spare parts?		
2	How have critical spare parts been identified?		
3	How to you determine if adequate supplies on hand? Has an inventory tracking system been implemented?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

VI A. SSES: System Assessment

VI A	Question	Response	*Act
1	Do POTW flow records or prior I/I or SSES programs indicate the presence of public/private inflow sources or sump pumps? Please Explain.		
2	If problems are related to I/I, has a Sewer System Evaluation Survey (SSES) been conducted? When? What is the status of the recommendations?		
3	Do you have a program to identify and eliminate sources of I/I into the system including private service laterals and illegal connections? If so, describe.		
4	Have private residences been inspected for sump pumps and roof leader connections?		
5	Are inspections to identify illicit connections conducted during the property transfer process?		
6	How many sump pumps and roof leaders have been identified? How many have been removed?		
7	Have follow-up homeowner inspections been conducted?		
8	What incentive programs exist to encourage residences to disconnect roof leaders & sump pumps? i.e. matching funds, etc.		
9	What disincentive programs exist to encourage residences to disconnect roof leaders & sump pumps? i.e. fines, surcharges		

VI.B. SSES: Manhole Inspection

VI B	Question	Response	*Act
1	Do you have a manhole inspection and assessment program?		
2	Has a formal manhole inspection checklist been developed?		
3	How many manholes were inspected during the past calendar year?		

* Put an “A” in the final column if this is an issue you intend to address with future action.

VII. Energy Use

VII	Question	Response	*Act
1	What is your annual energy cost for operating your system? For which pieces of equipment do you track energy use?		
2	Have you upgraded any of your pumps and motors to more energy efficient models? If so, please describe.		
3	Have you performed an energy audit in the past three years?		
4	Where do you use the most energy (fuel, electricity) in operating your collection system?		
5	If you have a treatment plant, would you be interested in participating in EnergyStar benchmarking of your treatment plant?		

VIII. Other Actions

VIII	Question	Response	*Act
1	Describe any other actions that you plan to take to improve your CMOM Program that are not discussed above.		

* Put an “A” in the final column if this is an issue you intend to address with future action.

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100
Boston, MA 02109-3912

SANITARY SEWER SYSTEM COMPLIANCE INSPECTION

CITY OF LEWISTON, MAINE

INSPECTION REPORT

Inspection Dates:
October 27–28, 2015

Report Date:
February 1, 2016

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TABLE OF CONTENTS

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I. INTRODUCTION

On October 27–28, 2015, the U.S. Environmental Protection Agency (EPA), with assistance from PG Environmental, LLC, an EPA contractor, (collectively, EPA Inspection Team) inspected the City of Lewiston, Maine (hereinafter, City) sanitary sewer collection and conveyance system to assess operation and maintenance of the system and sanitary sewer overflow (SSO) reporting procedures. The EPA Inspection Team was accompanied by representatives of the Maine Department of Environmental Protection (DEP) during both days of the inspection. The compliance inspection consisted of the following:

- Discussions with representatives from the City regarding the operation and maintenance (O&M) of the collection system, reporting procedures, the collection system plans and manuals, and the capital improvement program (CIP).
- Examination of the City's collection system operation, maintenance, and reporting records.
- A physical inspection of assets critical to the City's collection system.
- Review of the City's data management and warehousing systems, collection of operational information, and documents relevant to the inspection.

Wastewater collected from City residential, commercial, and industrial connections is transported to the Lewiston Auburn Water Pollution Control Authority (LAWPCA) Water Pollution Control Facility (WPCF) for processing and discharge. The City's wastewater collection system is regulated under the Maine Pollutant Discharge Elimination System (MEPDES) Permit No. ME0100994 (hereinafter, Permit). The City is also covered under applicable state and federal regulations, such as the *Clean Water Act* (CWA) and the *Code of Federal Regulations* (CFR).

The following personnel were involved in the inspection of the City's sewer collection and conveyance system:

City Representatives:	Kevin Gagne, Deputy Director of Water and Sewer
	Dave Jones, Director of Public Works
	Richard Burnham, City Engineer
	Justin Early, Project Engineer
	Jim Ward, GIS Coordinator
	Marcel Lauze, Water and Sewer Foreman (10/28 only)
	Butch Boucher, Capital Projects Superintendent (10/28 only)
	Jeff Beaule, Combined Sewer Overflow (CSO) Coordinator (10/28 only)
	Lauren Shaw, Administrative Assistant
DEP Representatives:	Stuart Rose, ES IV
	David Breau, Sr. Environmental Engineer
EPA Inspection Team:	Alex Rosenberg, EPA Region I Inspector
	Danny O'Connell, PG Environmental, LLC
	Jason Rose, PG Environmental, LLC

II. ASSESSMENT OF THE CITY'S OPERATION AND MAINTENANCE PROGRAM

The following sections provide a summary of the observations made during the inspection and the review of materials provided by the City. Appendix C contains photographs collected during the field activities. Appendix D contains exhibits collected and reviewed during or after the inspection.

A. Wastewater System Background

The City's collection system encompasses an area of 16 square miles and is composed of both separate and combined sewers. The City has a population of approximately 30,000. The collection system has 150 miles of gravity pipelines and 16 pump or lift stations. By the end of 2014, the City had completed separating the combined system in 95% of Lewiston's public streets. Dry-weather flow eventually enters the LAWPCA WPCF, which has an average influent rate of 10.3 to 13.9 million gallons per day (mgd). City representatives stated that the City of Auburn also owns capacity at the LAWPCA WPCF, and gets priority over Lewiston.

Although the combined sewer system was not a primary focus of the inspection, the EPA Inspection Team did review some aspects of the CSO program that had implications on the City's sewer program as a whole. Since 2000, the City has eliminated 25 of 37 original CSO outfalls. The City has constructed two wet-weather storage assets–an offline storage asset at Water Street Station and an in-line storage asset in the vicinity of the Morningside CSO Outfall. The City purchased smoke testing equipment in 2003, and has located and removed 873 catch basins from the combined system. In the past 15 years, the City has cleaned 803,000 linear feet of sewer and removed 883 tons of sediment. The total linear feet cleaned likely includes multiple cleanings of hot-spot lines, so the total length of the City's system that has been cleaned is likely less than 803,000 feet.

According to the CCTV Inspection Summary (Appendix D, Exhibit 1), as part of its sanitary sewer evaluation program, the City has cleaned and televised 316,228 linear feet of the system. The City expects to complete the remaining estimated 260,000 feet of TV inspections by 2019. City representatives explained that criticality and priorities had been assigned to certain areas for follow-up repair and maintenance as a result of the evaluation program. The most critical, highest priority areas will be targeted first for this work. The City will continue to evaluate how many additional regulators can be eliminated without causing undesirable consequences (e.g., extensive surcharging of collections system, basement backups, SSOs, etc.).

The EPA Inspection Team requested a pump station equipment inventory for all 16 pump stations. The City was unable to provide that inventory at the time of inspection, as it would have required pulling together information from many different sources. The City promised to send this information once it was able to compile it. As of the date of this report, this information had not yet been received.

B. Collection System Mapping

At the time of the inspection, the City had a geographic information system-based (GIS-based) map, which depicted assets such as sewer lines, manholes, and CSO regulators and outfalls, among other features. The GIS included information on asset location, material (in the case of

pipes and manholes), and size; however, the GIS did not contain all of this information for all of the City's sewer assets. City staff has been developing the sewer GIS layer for more than 15 years, and they are continually editing, adding, and developing the data to be as complete and accurate as possible.

In 2013, the City began requiring the video inspection reports to be compatible with the City's GIS sewer layer, and began linking sewer video inspection data to the GIS layer using software called *IT Pipes*. The City is working toward the goal of having all staff use the GIS layer as the master library for all sewer-related information.

C. Service Requests and Work Order System

The EPA Inspection Team reviewed the City's system for receiving and responding to customer service requests, as well as for service request and work order tracking. At the time of the inspection, the City was generating and tracking service requests and work orders mostly with hardcopy paperwork. The primary method used for generating service requests based on complaints or problems (i.e., reactive maintenance) and logging time and materials used each day was also physical paperwork. The City recently began utilizing a computerized maintenance management system (CMMS), *EGov*, but currently is using this only for tracking the progress of work orders and not for post-event analysis or planning.

The City receives service requests from customers in two ways. During business hours (i.e., 7:00 a.m. to 4:00 p.m., Monday through Friday), water and sewer-related calls are commonly received by one of the two dispatch attendants who work in the stock room. When answering phone calls during business hours, the attendants record caller information on a notepad, including the date, and the caller's name, address, and phone number. After business hours, callers are instructed to call 911. The 911 operators record the date, name, address, and phone number of the caller, then contact the City's on-call dispatch person. The dispatch person enters caller information into *EGov* and contacts crew members to respond to the call. The dispatch person also fills out a work order, referred to as a blue sheet, which is used to track time and materials used for each work task. Field crews do not typically carry the blue sheets with them. Rather, the field crew supervisor fills out the blue sheet based on what the field crew finds at the site. City representatives stated that site-specific information about field tasks is not reliably tracked on the blue sheets or in *EGov*.

The City provided the EPA Inspection Team with its *Operations and Maintenance Plan* (O&M Plan, Appendix E*),* which was the only documentation describing activities for the system. According to the O&M Plan, the Sewer Division operations staff is notified immediately by radio during business hours about calls potentially related to sewer problems. After business hours, the Water and Sewer standby person is contacted. The standby person is supposed to immediately notify the appropriate on-call Sewer Division operations staff to investigate. The O&M Plan states that, once onsite, maintenance personnel are supposed to report a description of what they observe and what response they make to the problem on their work order form. The work order form data is then entered into EGov for tracking and further analysis by Water and Sewer supervisors and the Engineering Division.

City representatives stated that the City is not responsible for any portion of laterals off of the sewer mains. Private properties are responsible for private laterals, as well as the connections to sewer mains. When the City finds an issue in a private lateral, the private owner is given 10 days to make the necessary repairs.

The City's discharge permit states that once a noncompliant occurrence is verified at a site, the City is responsible for verbally notifying DEP of the event within 24 hours, for submitting a written summary to DEP within 5 days, including a description of the noncompliant event and its cause, the duration, including exact dates and times. If the issue has not been corrected, the City must also include the anticipated amount of time it is expected to continue as well as the steps taken or planned to reduce, eliminate, and prevent reoccurrence.

The City had reported five unpermitted discharges to DEP between April 27, 2010 and December 31, 2014 (refer to Appendix D, Exhibit 2). Specifically, the City provided spreadsheet data indicating the date and time, location, cause, a brief description, and estimated volume (if known) of the events. The data indicated that these unpermitted discharges were caused by unknown blockages, vandalism, grease blockages, pipe failure, and illegal discharges.

The City provided the EPA Inspection Team with records of 233 reported sewer backups from July 25, 2008 through the date of the inspection (Appendix D, Exhibit 3). The EPA Inspection Team requested records for two of the reported events on this list (Appendix D, Exhibit 4). One record, from September 30, 2015, reported, "Sewer is plugged up in roadway by manhole." It included an entry marking this record as "Resolved," and saying that it was due to heavy rains. The other record, from June 16, 2015, reported "sewer backup in road." This record was marked as "resolved." but there was no description in the record of any work that was done to address the backup.

Documentation of details of these events or the work performed to resolve them was inadequate to make a determination of whether these events were unpermitted and unreported discharges.

The City stated that it is insured by the Maine Municipal Association. The City stated that claims were handled at a different City office.

D. Collection System Maintenance

The O&M Plan stated that collection system operation and maintenance is handled by the Water and Sewer Divisions of the Public Works Department. The City employed a total of 17 full-time, cross-trained employees: 3 equipment operators, 6 water and sewer service personnel, 6 water and sewer workers, 2 water and sewer pump station and treatment operators, and 1 SCADA and controls technician. All operations staff are supervised by the Water and Sewer Foreman, operations manager, electrical superintendent, or a sewer superintendent.

At the time of the inspection, the City owned one tandem vactor truck and one Aries Sewer Televising trailer. The City did not own a closed circuit television (CCTV) truck. City staff indicated that employees have on-the-job training and certain teams are cross trained between water and sewer responsibilities; this training is not documented. Workers also receive factory training for certain equipment they might be using.

The City has 16 pump/lift stations, all of which are equipped with backup generators and supervisory control and data acquisition (SCADA) systems for remote monitoring of operations. The City does not keep operations logs at the pump/lift stations.

The City provided the EPA Inspection Team with a list of "hot spots," showing five hot spots each for their most common causes–fats, oils, and grease (FOG), roots, and structural issues. The City also stated that this list of hot spots was not comprehensive. It was merely intended to provide a sample of areas with each known issue. City representatives stated that field operators keep track of which areas may need more, or less, frequent maintenance, but they rely mostly on their institutional knowledge rather than keeping an actual list of these locations. The City did not have a formalized program for dealing with these hot spots.

The EPA Inspection Team requested copies of the GIS data for Pipe ID 3524 on Sabbatus Street, which appears on the list of FOG hot spots. The City was able to provide this data immediately by calling up the asset in GIS, and were also able to use the GIS to open results of a CCTV inspection in *IT Pipes (Appendix D, Exhibit 5).*

The City keeps logs of the activities for these hot spots in a binder titled "Flushing Log for Problem Areas (Appendix D, Exhibit 6)." A copy of this binder was provided to the EPA Inspection Team. This binder contains entries from monthly, bi-monthly, and semi-annual cleaning activities spanning the period from 2008 to the date of inspection. These entries include the date, crew names, address of the issue, brief description of work done, condition of problem, and size and length of the main. The log book was not referenced by the operations team when making decisions about cleaning frequency, type of debris encountered in the past, or any unique issue or concern that may have been encountered at this sewer asset.

The City also provided the EPA Inspection Team with a binder titled "Flushing Log". The cleaning truck operators fill out this binder to track cleaning activities of locations that are not hot spots or part of the "Problem Areas." This log contained entries of the same nature of those described in the "Flushing Log for Problem Areas"; it also did not reliably contain field observation information unique to activities that would be useful for determining whether a certain asset might need to be cleaned more often, or need other maintenance or repair work.

The EPA Inspection Team visited several assets during the inspection and made the following observations:

- The outfall pipe at the Morningside CSO Outfall has become separated approximately 1 inch from the buried pipe leading to it (Appendix C, Photograph #9). Some of the sewage being discharged to this CSO outfall would likely exit the buried pipe prior to reaching the outfall discharge point.
- At the Randall Road Pump Station, the EPA Inspection Team noticed that the variable frequency drive (VFD) for Pump #1 had been locked out and tagged out, but the Pump #1 control panel switch was still set to "Remote" (Appendix C, Photograph #16), meaning that the control panel was still set to be controlled remotely based on measured water levels within the wet well. This control panel indicated a VFD fault, which was likely a

result of the VFD having been locked out. The control panel knob should have been turned to "Off" in order to provide some redundancy and to ensure that electrical lines to the pump are not unexpectedly energized. Once this was brought to his attention, a City operator made this adjustment.

The City did not have cleaning activity scheduled for the day of the inspection. However, at the request of the WPA Inspection Team, the City sent the cleaning crew to perform routine cleaning of one of their hot spots. A strong hydrogen sulfide odor and dark, turbid wastewater were observed coming from the sewer line as it was being cleaned.

The City did not have a FOG program.

E. WPCF and Wet-weather Operations

The LAWPCA WPCF was not a primary focus of the inspection; however, the EPA Inspection Team did review the City's wet-weather operations, which included process control modifications to maximize wastewater flows to the facility. Appendix F contains a copy of the facility's *Wet Weather Management Plan and High Flow Operations and Bypassing Guide*. The EPA Inspection Team also observed the LAWPCA's SCADA system at the WPCF. The SCADA system included WPCF level monitoring and influent flow rates.

The WPCF has an average influent rate of 10.3–13.9 mgd and is required to be able to handle peak flows of approximately 25 mgd before secondary bypass occurs, and 32 mgd before the CSO is activated via the Structure B Outfall. Records provided by LAWPCA show that a wet-weather event occurring on September 30, 2015 resulted in average flows of approximately 28 mgd to the WPCF. It appears that approximately 13 mgd was discharged as a bypass, presumably through Structure B.

The EPA Inspection Team reviewed the City's wet-weather operations on the morning of October 28, 2015. The City's CSO Coordinator told the EPA Inspection Team that in anticipation of wet weather, he checks the water levels in the offline storage tanks to verify the tanks have been purged from previous rain event. There are two water level sensors at the Water Street Storage Tanks–one at the overflow weir and one near the pump station used to drain the tank. The City showed the Inspection Team EPA data from the SCADA system for the September 30, 2015 rain event, which the City's rain gauge showed was between a 5-year and 10-year event. During the rain event, the offline storage at Water Street began to fill once a water level of 4 feet had been reached in the regulator vault. The water levels are recorded every 1–2 minutes. The measurements showed that the CSO regulator began to discharge to the Androscoggin River once the offline storage was full. After the rain stopped, the data show the CSO discharge stopped, then water levels in the offline storage tanks dropped. The City has found that these offline storage tanks flush very well, and it is possible to still see the floor of the tanks after wet weather events. The Water Street offline storage facility is routinely inspected once per month. No additional inspections are performed after wet-weather events. There is also no written procedure for evaluation of wet-weather system performance.

LAWPCA also manages the industrial pretreatment program (IPP) for the service area. The IPP coordinator was at training in New Hampshire during the inspection process. The EPA Inspection Team received a significant industrial user (SIU) permit containing wet-weather restrictions for review.

F. Capital Improvement Program

City representatives explained that the City has completed numerous CIP projects over the years in an effort to eliminate combined sewers and to improve infrastructure that dates back to the 1800s. As mentioned previously, since 2000, the City has eliminated 25 of 37 original CSO outfalls and has completed sewer separation in approximately 95% of public streets.

The City provided budgeted capital expenditures forms for FY16 through FY20 (refer to Appendix D, Exhibit 4), which include $5 million ($1 million per year) for rehabilitation of old sanitary sewer mains, $265,000 for sewer main inspections in 2016, $320,000 in pump station improvements, $250,000 ($50,000 per year) for inflow/infiltration removal, and $368,000 for equipment replacement.

III. ADDITIONAL OBSERVATIONS

City representatives indicated that portions of the City's sewer system had never been inspected. While the City has begun a systematic approach toward CCTV inspections of their system, and expects to have this work complete by 2019, an indeterminate risk of failure due to the unknown, unevaluated portions of the system remains. The operation and maintenance of the collection system has only recently begun to include a regular cleaning and inspecting interval for the entire system. It remains to be see if this schedule is able to be influenced by complete datasets from all of the on-going sewer work.

For example, one of the unpermitted discharges described above occurred due to failure of the Hart Brook Interceptor, which resulted in discharge of an unknown quantity of sewage to Hart Brook. This discharge continued unabated from July 21, 2014 until September 30, 2014, when bypass pumping began. The pipe condition leading to this failure may exist in other portions of the City's collections system, which they have not yet inspected. There was no documentation that the City has evaluated sewer assets with similar age, pipe materials, and operational conditions.

Operators stated they do not keep a log book at each lift station. This makes it more difficult for operators to track issues found during their regular inspection of these stations, and potentially limits the amount of information available to management for planning and budgeting purposes. Once this was brought to his attention, a City operator made this adjustment. An SOP had was not in place for this process.

At the time of the inspection, City field crews were documenting completed work on a "Blue Sheet." Field operators recorded their primary activities during the day so that their progress could be tracked. The City stated that "Blue Sheets" did not typically include information relating to the uniqueness of the maintenance activities that were conducted (e.g., quantities and asset characteristics observed).

IV. RECOMMENDATIONS & REFERENCE MATERIALS

At the out-briefing, the EPA Inspection Team recommended the City continue to develop and implement structured and written SOPs for activities critical to the proper O&M of the collection system.

More specifically it was recommended that SOPs should include the following:

- detailed, step-by-step procedures for conducting the maintenance and cleaning activities, including the following pipe maintenance activities:
    - Preventive maintenance cleaning and blockage removal;
    - Types of equipment to be used ("tiger tails," nozzles, screens/rakes, etc.);
    - Guidelines and/or reference tables for appropriate jetting pressures and flows based on the type of jetting activity, type of pipe, size of pipe, age of pipe, and known condition of pipe; and
    - Requirements for formally documenting pipe conditions, materials removed during cleaning, and other findings so the results can be reviewed, and if needed, evaluated by managerial staff.
- A reoccurring process of review and evaluation of maintenance activities and frequencies based on the O&M findings as well as inspections/assessments.

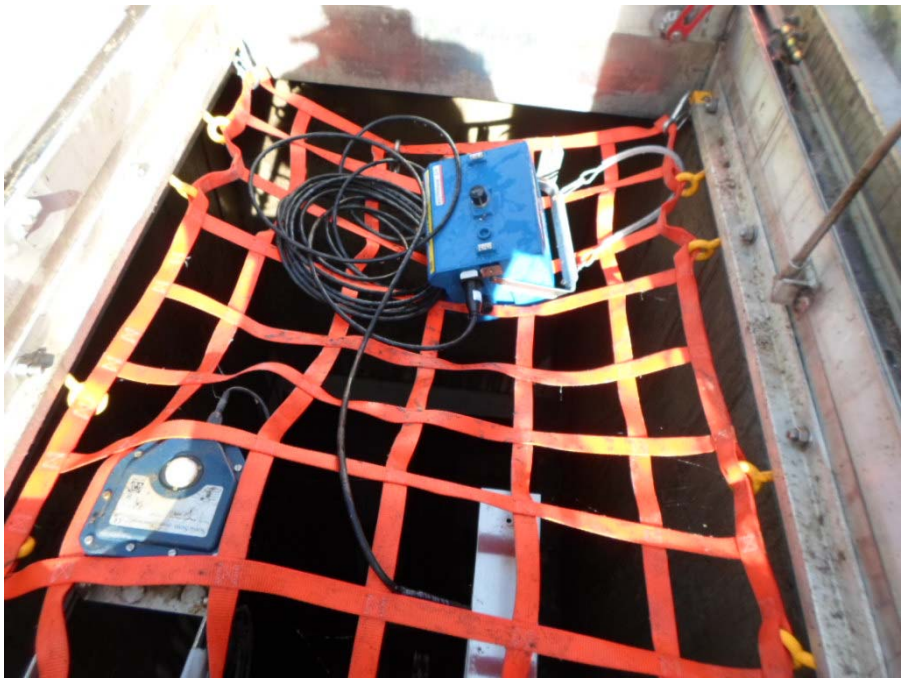
Reference materials to support the development of the SOPs are available from various sources (equipment manufacturers, equipment vendors, professional associations, EPA, etc.), including references such as the National Association of Sewer Service Companies' *Jetter Code of Practices* (http://nassco.org/publications/p_techman.html), which provides guidelines for the proper operation of sewer jetter equipment.

Appendix C
Photograph Log

Photograph 1. Morningside CSO Outfall #015 – View of the outfall sign positioned adjacent to the outfall pipe and receiving stream.

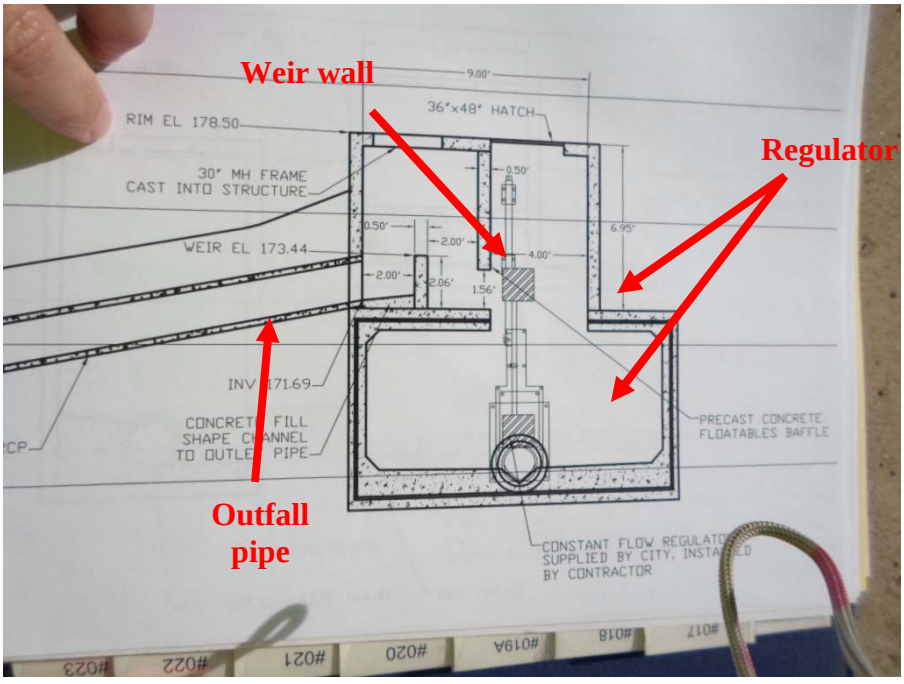
Photograph 2. Morningside CSO Outfall #015 – View of downstream area above inline storage pipe.

Photograph 3. Morningside CSO Outfall #015 – Regulator vault exterior.



Photograph 4. Morningside CSO Outfall #015 – View of instrumentation inside vault hatchway access to regulator.

Photograph 5. Morningside CSO Outfall #015 – View inside regulator vault showing regulator.



Photograph 6. Morningside CSO Outfall #015 – View of the regulator asset drawing.

Photograph 7. Morningside CSO Outfall #015 – View inside weir wall side of the regulator vault (access via manhole cover).

Photograph 8. Morningside CSO Outfall #015 – Looking toward outfall from regulator vault.

Photograph 9. Morningside CSO Outfall #015 – View of separated outfall pipe.

Photograph 10. Morningside CSO Outfall #015 – View of dry outfall.

Photograph 11. Morningside CSO Outfall #015 – Side view of outfall. No sanitary sewer debris was documented, however there was some rag-like debris in vegetation.

Photograph 12. Morningside CSO Outfall #015 – View of area downstream of outfall. No sewer debris documented.

Photograph 13. Morningside CSO Outfall #015 – View inside manhole immediately downstream of the regulator vault.

Photograph 14. Randall Road Pump Station – View of sign on side of building.

Photograph 15. Randall Road Pump Station – View of the control room.

Photograph 16. Randall Road Pump Station – View of the Pump 1 control panel.

Photograph 17. Randall Road Pump Station – View of the programmable logic controller (PLC) display screen. The operational variables are transmitted to the City's SCADA system.

Photograph 18. Randall Road Pump Station – View of local wet well water level displays. The levels were a component of the operational data displayed on the station's PLC and transmitted to the City's SCADA system.

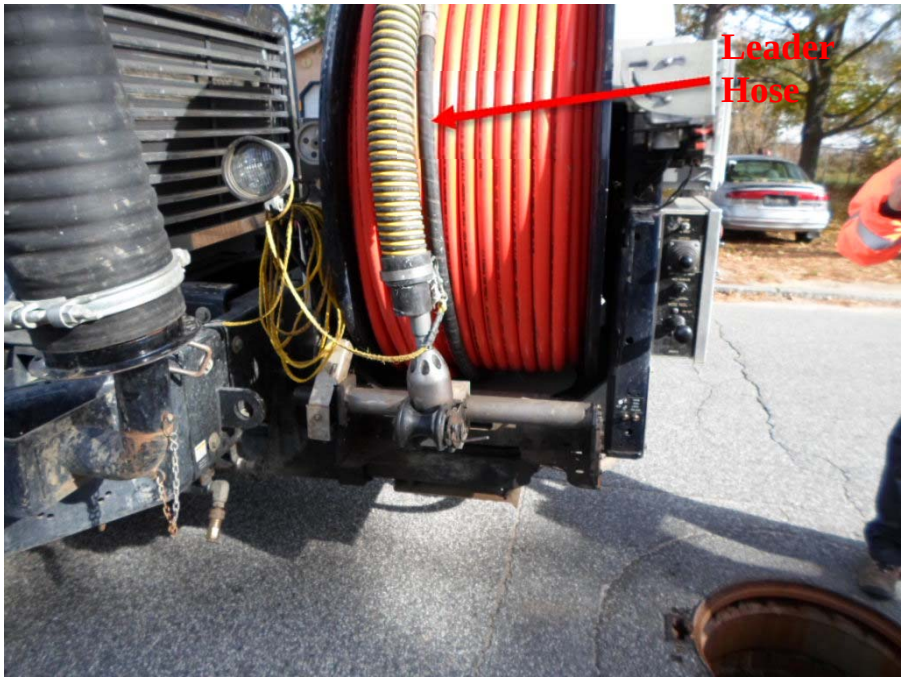
Photograph 19. Randall Road Pump Station – View of the dry well and the station's three pumps.

Photograph 20. Randall Road Pump Station – View of creek near pump station building.

Photograph 21. Randall Road Pump Station - View of station's influent isolation gate valve.

Photograph 22. Randall Road Pump Station – View of top of gate valve. It is unclear if this gate valve was receiving regular exercising or other maintenance.

Photograph 23. Sewer Cleaning Operations – View of combination jet/vacuum truck.



Photograph 24. Sewer Cleaning Operations – Photo of leader hose and nozzle.

Photograph 25. Sewer Cleaning Operations – View inside manhole about to be cleaned. Note the black color within the sewer line.

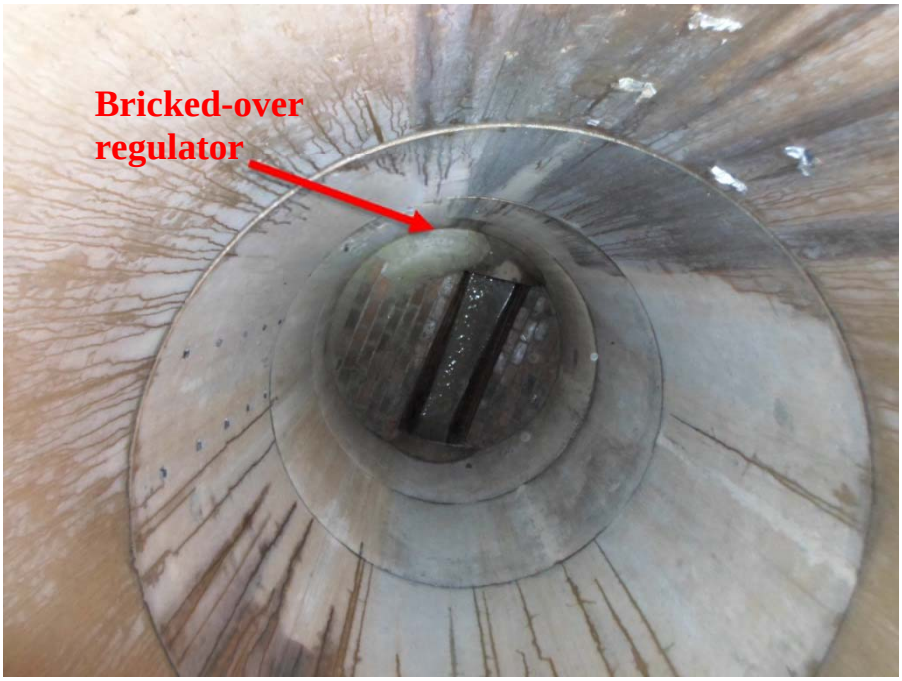
Photograph 26. Tall Pines Pump Station – View of dry well entry hatch.

Photograph 27. Tall Pines Pump Station – View of backup generator housed in a separate building.

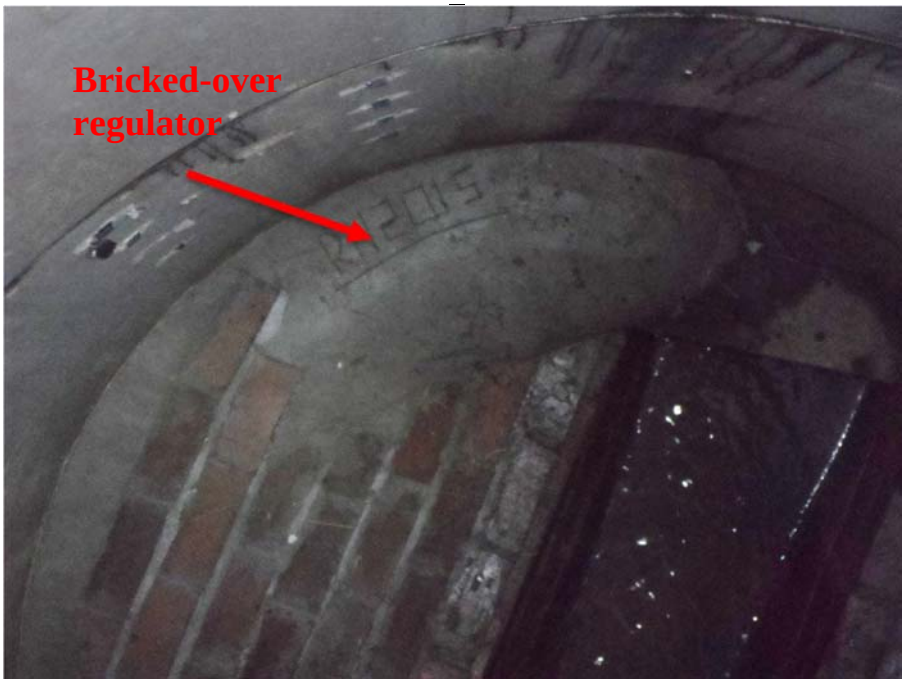
Photograph 28. CSO Outfall #013 – View of the decommissioned CSO outfall. There were no signs of sanitary debris or odor.

Photograph 29. CSO Outfall #013 – View of the outdated CSO sign.

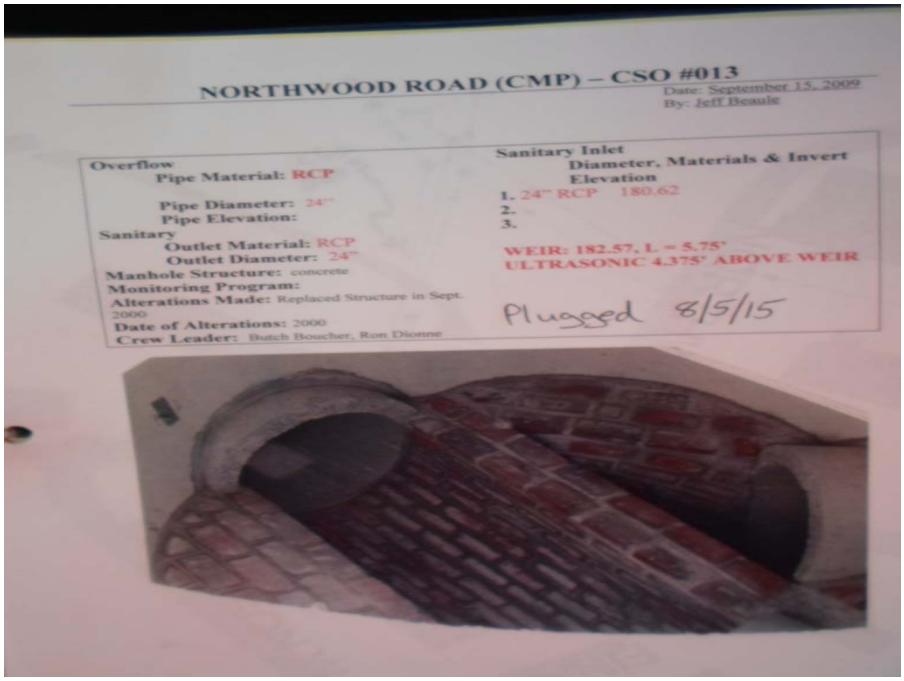
Photograph 30. CSO Outfall #013 – Manhole with CSO regulator inside it. This regulator is sealed with concrete.



Photograph 31. CSO Outfall #013 – Inside manhole with sealed over regulator.



Photograph 32. CSO Outfall #013 – Close-up of bricked-over regulator. The brightness of this picture has been enhanced so that the writing in the new concrete can be seen.



Photograph 33. CSO Outfall #013 – The fact sheet for CSO 13. The fact sheet has been modified to document that the overflow was plugged on 8/5/15.

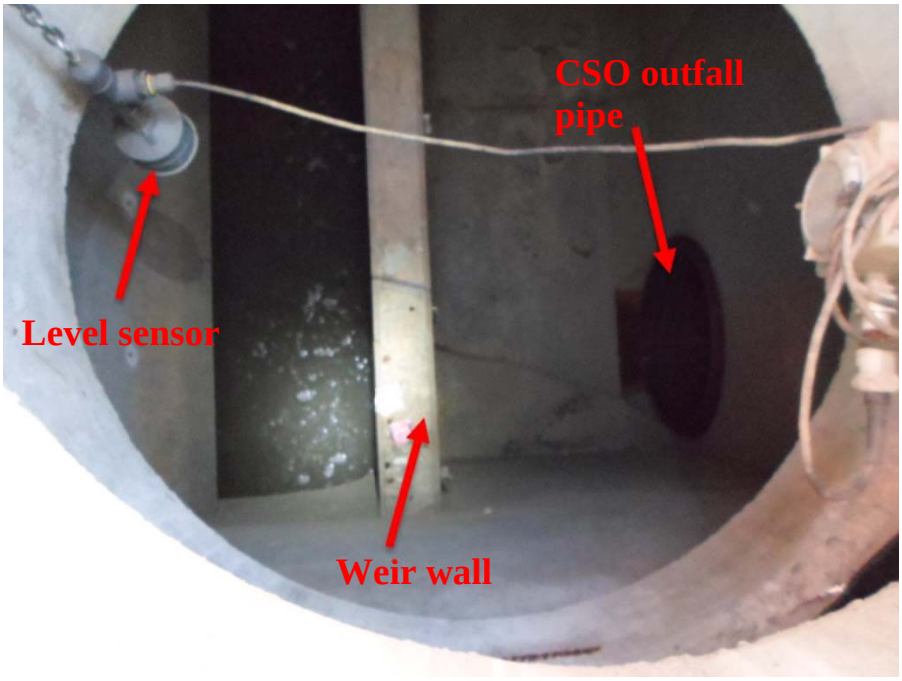
Photograph 34. CSO Outfall #24 – Jepson Brook – View of the CSO location from across street.

Photograph 35. **CSO Outfall #24 – Jepson Brook – View inside manhole showing the CSO weir wall, level sensor, and the sewer line.**

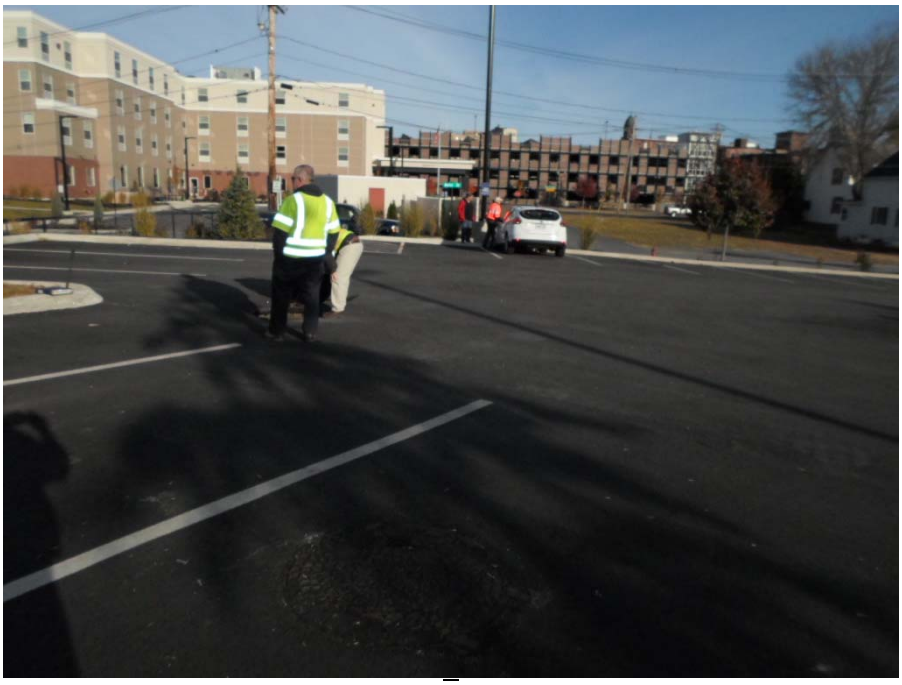
Photograph 36. **CSO Outfall #24 – Jepson Brook – View of Jepson Brook, immediately upstream of the CSO. There was no odor in the area.**

Photograph 37. CSO Outfall #21 – Lowell Street at Middle Street – View of metering devices.

Photograph 38. CSO Outfall #21 – Lowell Street at Middle Street – View inside manhole showing older, concrete-plugged outfall pipe, with current outfall pipe positioned above it.



Photograph 39. **Water Street CSO Regulator and Outfall #004 – View inside manhole showing CSO weir and outfall pipe.**

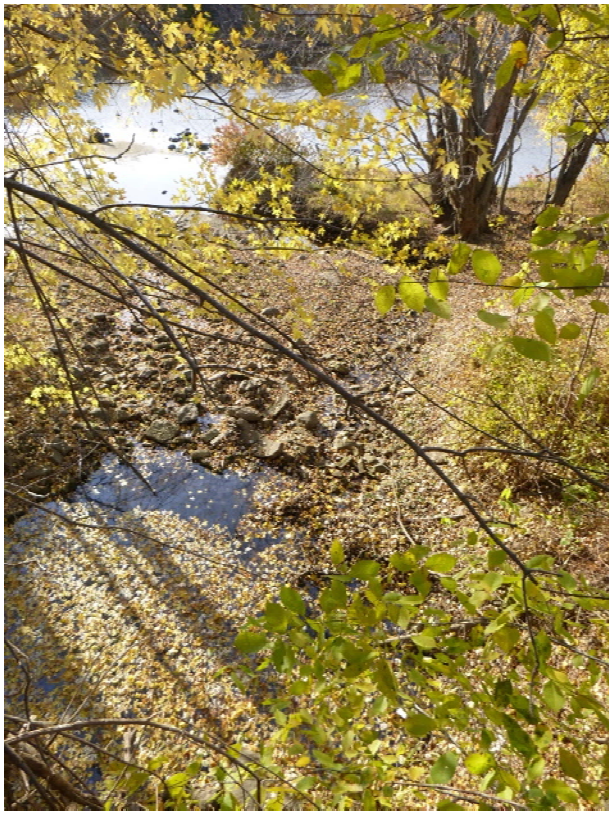


Photograph 40. **Water Street CSO Regulator and Outfall #004 – Parking lot covering offline storage.**

Photograph 41. Water Street CSO Regulator and Outfall #004 – View of the offline storage tank's influent structure.

Photograph 42. Water Street CSO Regulator and Outfall #004 – View of CSO outfall sign from parking lot.

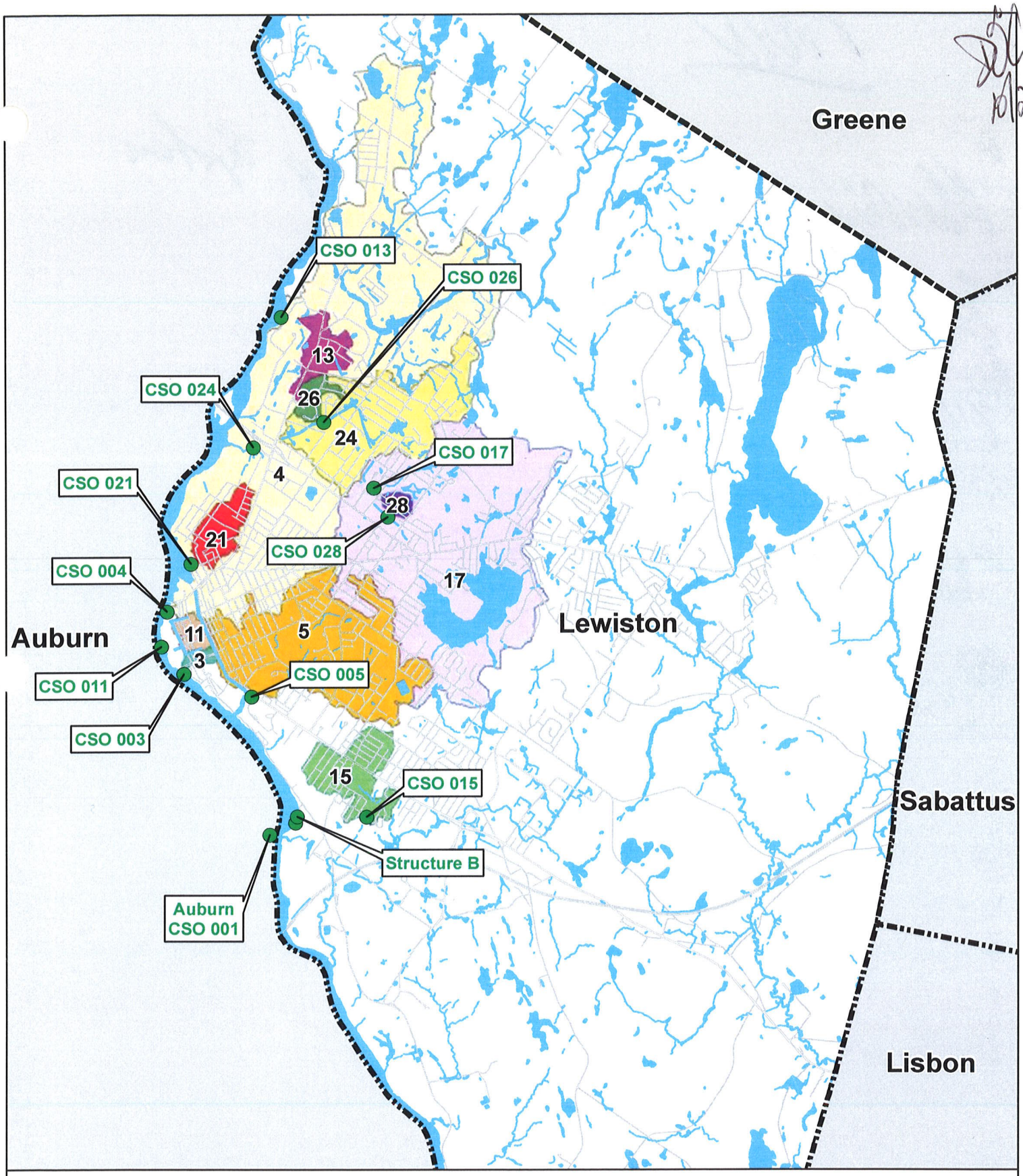
Photograph 43. Water Street CSO Regulator and Outfall #004 - View of outfall sign.



Photograph 44. Water Street CSO Regulator and Outfall #004 - View of area downstream of outfall.

EXHIBIT 1

CSO Map



Legend

- CSO Regulators
- CSO-Shed Area
- Town Line
- Lewiston Town Line

Clean Water Act Master Plan
15 Year Update

0 0.25 0.5 1 Miles

N W E S

Figure 5-3
City of Lewiston, ME
CSO Areas
June 2015

CDM Smith

HEALYMM Z:\Lewiston\MXD\NewFigures\Figure 5-3.mxd 6/26/2015

EXHIBIT 2

CCTV Inspection Summary

CCTV Inspection Summary

2008 - Interceptors

1. Main Interceptor, CSO Storage Facility to LAWPCA (9000 LF)
2. Hart Brook (14000LF)

Cost: $81,000

2012 - Interceptors

1. Androscoggin (17400 LF)
2. Franklin Pasture (4200 LF)
3. Stetson Brook (7400 LF)
4. No Name Brook (17500 LF)
5. Jepson Brook (11400 LF)
6. Gully Brook (3100 LF)

Cost: $85,048

2014 – Sewer Mains (97,736 LF)

Cost: $76,882

2015 – Sewer Mains (162,559 LF, 676 manholes)

*Contract included cleaning and inspecting

Cost: $525,600

Total amount inspected to date: 316,228 LF
Total Cost to date: $768,530

Total amount remaining to be inspected: 260,000 LF
Estimated cost: $800,000 (includes cleaning)

EXHIBIT 3

Discharges Reported to MEDEP

From April 27, 2010 and December 31, 2014

Single Facility NCR/Events Report

REGION **PO**

NPID ME0100994 **FNML:** **LEWISTON CITY OF** **Inspector:** Stuart Rose

Facility Minor POTW; CSO discharges; license expires 11/18/15.

Contact DAVID JONES Phone: 207-784-5753

Mailing: Lewiston City Of
103 ADAMS AVE

LEWISTON ME 04240

Location: LEWISTON COMBINED SEWER OVERFL
CITYWIDE

LEWISTON ME 04240

Assigned DEP Engineer: Brandi Piers

Most Current Report_Date	Status Description	Event Date:	Resolved_Date	Major_Problem	Summary	Licensee's Reported Cause MechUnit	General	Specific	Concur
04/18/2014	First Violation after Clean Quarter(s)	4/7/2014		SSO-Warren Ave Garcelon Bog	Unknown volume and duration sanitary sewer overflow from cross country line off Warren Ave going towards Jeanatte Ave; from manhole cover; unknwon cause currently, but line was cleared by Ted Berry, and overflow stopped; old reinforced concrete pipe (1959) but no known defects; edge of Garcelon Bog; evaluation and cleaning will be scheduled when weather conditions allow.	04/18/2014	SEWER		Y

Inspector's Recommendations

Inspector wanted *NCR Committee review?* N *Date Discussed:*

NCCommittee Recommendations

Inspector's Comments

Most Current Report_Date	Status Description	Event Date:	Resolved_Date	Major_Problem	Summary	Licensee's Reported Cause MechUnit	General	Specific	Concur
07/12/2011	Violation Corrected	6/25/2011	8/2/2011	SSO at Jepson Brook	Estimated 5.35 MG to Jepson Brook from CSO #028 (Lemont); although flow recorded here, discharge went undetected from 6/25 to 7/3, as location not visually observable (odor and floatables noticed by neighbor 7/3); vandalism at interceptor manhole below CSO--rakes and sticks; City understands preventive measures like bolted manholes and real	07/12/2011	SEWER		Y

Single Facility NCR/Events Report

Report Date									
8 (rather than recorder					time flow measurement download) could have prevented or reduced discharge, but with such a large system the expense is an obstacle for how often the problem occurs.				
Inspector's Recommendations	Monitor. C2					*Inspector wanted*	*NCR Committee review?*	Y	*Date Discussed:* 7/13/2011
NCCommittee Recommendations	DEP letter for SSO, recommending increased security measures.								
Inspector's Comments									

Most Current Report_Date	Status Description	Event Date:	Resolved_Date	Major_Problem	Summary	Licensee's Reported Cause MechUnit	General	Specific	Concur
05/18/2010	Violation Corrected	4/27/2010	6/7/2010	SSO to Stetson Brook	Unknown amount discharged to Stetson Brook from 8 inch sanitary line manhole; blockage from grease; Code enforcement to investigate restaurant grease traps; City will step up monitoring of this pipe (goal has been cleaning all pipes every 5 years, but problem areas checked more often); affected area limed.	05/18/2010	SEWER		Y

Inspector's Recommendations	Monitor					*Inspector wanted*	*NCR Committee review?*	Y	*Date Discussed:* 5/19/2010
NCCommittee Recommendations	Monitor SSO's.								
Inspector's Comments									

Events for Last Five Years

	Event_Type	Event_Code	Scheduled	Event_Date	Evt_Ref_Date	Evt_Ref_Type	CompUpdt	NCR	Comments
ME0100994	V	SSO		4/7/2014	4/9/2014	DIR	N	Y	Unknown volume and duration sanitary sewer overflow from cross country line off Warren Ave going towards Jeanatte Ave; from manhole cover; unknwon cause currently, but line was cleared by Ted Berry, and overflow stopped; old reinforced concrete pipe (1959) but no known defects; edge of Garcelon Bog; evaluation and cleaning will be scheduled when weather conditions allow.
ME0100994	A	INSP-R	5/31/2013	6/27/2013			N	N	Inspection includes No Name Pond separate permitted facility; inspected Tall Pines pump station, Water St. storage facility; several CSO locations.
ME0100994	A	LET	7/31/2011	8/2/2011	7/13/2011	NCRR EV	N	N	DEP letter for SSO, recommending increased security measures.

Single Facility NCR/Events Report

ME0100994	V	DWO		6/25/2011	7/7/2011	DIR	N	Y	Estimated 5.35 MG to Jepson Brook from CSO #028 (Lemont); although flow recorded here, discharge went undetected from 6/25 to 7/3, as location not visually observable (odor and floatables noticed by neighbor 7/3); vandalism at interceptor manhole below CSO--rakes and sticks; City understands preventive measures like bolted manholes and real time flow measurement (rather than recorder download) could have prevented or reduced discharge, but with such a large system the expense is an obstacle for how often the problem
ME0100994	A	INSP-C	5/31/2011	5/16/2011			N	N	[rescheduled as Insp-C from Insp-R) Checked Randall Road pump station; Goff Brook storage facility (CSO#015), Gulley Brook CSO discharge point (#005); illegal discharge from Grummels discovered at Gully Brook. Checked out Drew St odor complaint.
ME0100994	A	MONITOR	5/31/2010	6/7/2010	5/19/2010	NCRR EV	N	N	Monitor SSO's.
ME0100994	V	SSO		4/27/2010	4/29/2010	DIR	N	Y	Unknown amount discharged to Stetson Brook from 8 inch sanitary line manhole; blockage from grease; Code enforcement to investigate restaurant grease traps; City will step up monitoring of this pipe (goal has been cleaning all pipes every 5 years, but problem areas checked more often); affected area limed.
ME0100994	A	COMPSUM		12/31/2009			Y	N	CSO abatement projects continue; received ARRA stimulus funds in 2009 for several projects.
ME0100994	A	INSP-R	5/31/2009	6/26/2009			N	N	Visited Cottage St. CSO #008, Water St. CSO Storage Facility, Goff Brook/Morningside CSO #015 where ARRA storage facility to be built this year; flow monitoring work ongoing in preparation for 10 year flow modeling study next year to be done by CDM.

DMR Violations for Last Five Years

NonCompliance Summary for Last Five Years

NPID	FNML	Report_Date	Resolved_Date	Major_Problem	Summary	NCR?	RDF5
ME0100994	LEWISTON CITY OF	07/12/2011	8/2/2011	SSO at Jepson Brook	Estimated 5.35 MG to Jepson Brook from CSO #028 (Lemont); although flow recorded here, discharge went undetected from 6/25 to 7/3, as location not visually observable (odor and floatables noticed by neighbor 7/3); vandalism at interceptor manhole below CSO--rakes and sticks; City understands preventive measures like bolted manholes and real time flow measurement (rather than recorder download) could have prevented or reduced discharge, but with such a large system the expense is an obstacle for how often	Y	SMR
ME0100994	LEWISTON CITY OF	05/18/2010	6/7/2010	SSO to Stetson Brook	Unknown amount discharged to Stetson Brook from 8 inch sanitary line manhole; blockage from grease; Code enforcement to investigate restaurant grease traps; City will step up monitoring of this pipe (goal has been cleaning all pipes every 5 years, but problem areas checked more often); affected area limed.	Y	SMR

EXHIBIT 4

EGOV Sewer Backups

233 total Action Item Requests *LIST REPORT* * = Non-Listed Street Address

Action Line Form	Date submitted	Status	Submitted by	Contact Street Name	Assigned to	Department	Issue/Problem Location Street Name
(9247000856) Sewer Back Up	10/22/2015	SUBMITTED	DEB - STETSON RD ANIMAL HOSPITAL	75 STETSON RD	Marcel Lauze	Water / Sewer Division	75 STETSON RD
(9245411430) Sewer Back Up	10/21/2015	RESOLVED	CECILE DOYON	11 LUCILLE AVE	Marcel Lauze	Water / Sewer Division	11 LUCILLE AVE
(9186960810) Sewer Back Up	10/5/2015	RESOLVED	voice mail	12 EMILE ST	Marcel Lauze	Water / Sewer Division	12 EMILE ST
(9175982233) Sewer Back Up	9/30/2015	RESOLVED	KAREN - RENY PROPERTY MNGT	3 HOLY FAMILY ST	Marcel Lauze	Water / Sewer Division	3 HOLY FAMILY ST
(9144111408) Sewer Back Up	9/21/2015	RESOLVED	REMI THEBERGE	954 SABATTUS STREET	Ryan Barnes	Water / Sewer Division	954 SABATTUS ST
(9050011041) Sewer Back Up	8/25/2015	RESOLVED	ROBERT VALLEE	66 RIDEOUT	Marcel Lauze	Water / Sewer Division	66 RIDEOUT AVE
(9030530940) Sewer Back Up	8/20/2015	RESOLVED	SUE VACHON	19 CHURCH STREET	Marcel Roy	Water / Sewer Division	19 CHURCH ST
(9010660931) Sewer Back Up	8/14/2015	RESOLVED	MARY RICH	20 ALBERT ST	Marcel Lauze	Water / Sewer Division	20 APPLE RD *
(9006430915) Sewer Back Up	8/13/2015	SUBMITTED	TODD SHIFELLI	2 FRANKLIN ST	Marcel Lauze	Water / Sewer Division	2 FRANKLIN ST
(8851041114) Sewer Back Up	7/6/2015	SUBMITTED	SCOTT	113 KING AVE	Marcel Lauze	Water / Sewer Division	113 KING AVE
(8836570728) Sewer Back Up	7/1/2015	RESOLVED	PERRY MORIN	2 WAKEN AVE	Marcel Lauze	Water / Sewer Division	2 WAKAN AVE
(8769291203) Sewer Back Up	6/16/2015	RESOLVED	DICK MORIN	GENDRON DRIVE	Marcel Lauze	Water / Sewer Division	GENDRON DRIVE *
(8747691104) Sewer Back Up	6/11/2015	RESOLVED	GERRY RAYMOND	MT HOPE AVE	Marcel Lauze	Water / Sewer Division	MOUTN HOPE AVE *
(8712541532) Sewer Back Up	6/3/2015	RESOLVED	BRUCE WILSON	91 COLLEGE STREET	Marcel Lauze	Water / Sewer Division	91 COLLEGE ST *
(8658430845) Sewer Back Up	5/21/2015	RESOLVED	JAN BARRETT	1 WALNUT STREET	Marcel Lauze	Water / Sewer Division	1 WALNUT ST *
(8656211348) Sewer Back Up	5/20/2015	RESOLVED	MIKE DUMONT	228 CENTRAL AVE	Marcel Lauze	Water / Sewer Division	228 CENTRAL AVE
(8638360916) Sewer Back Up	5/18/2015	RESOLVED	JENNIFER BANTON	5 SHAWMUT STREET	Marcel Lauze	Water / Sewer Division	5 SHAWMUT ST
(8595411048) Sewer Back Up	5/7/2015	RESOLVED	CHET - RUSSELL PARK MANOR	158 RUSSELL ST	Marcel Lauze	Water / Sewer Division	158 RUSSELL ST *

(8593300733) Sewer Back Up	5/7/2015	RESOLVED	KEN PATRIE	16 PERLEY ST	Marcel Lauze	Water / Sewer Division	16 PERLEY ST
(8532171004) Sewer Back Up	4/22/2015	RESOLVED	BRANDON	161 LINCOLN ST	Marcel Lauze	Water / Sewer Division	161 LINCOLN ST
(8526860856) Sewer Back Up	4/21/2015	RESOLVED	BRANDON - LABADIES BAKERY	LINCOLN ST ALLEY	Marcel Lauze	Water / Sewer Division	LINCOLN ST ALLEY *
(8500901401) Sewer Back Up	4/14/2015	RESOLVED	PATRICIA GREEN	225 GROVE STREET	Marcel Lauze	Water / Sewer Division	225 GROVE ST
(8475691110) Sewer Back Up	4/8/2015	RESOLVED	CINDY MALIA	34 PERLEY STREET	Marcel Lauze	Water / Sewer Division	34 PERLEY ST
(8467881516) Sewer Back Up	4/6/2015	SUBMITTED	RESIDENT	35 SPRUCE STREET	Marcel Lauze	Water / Sewer Division	35 SPRUCE ST
(8386831339) Sewer Back Up	3/13/2015	RESOLVED	DJ - ACT NOW	LISBON ST	Marcel Lauze	Water / Sewer Division	LISBON ST in front of Tire Warehouse *
(8362230859) Sewer Back Up	3/6/2015	RESOLVED	GUY RODRIGUE	RIVERVIEW AVE	Marcel Lauze	Water / Sewer Division	RIVERVIEW AVE *
(8348280925) Sewer Back Up	3/2/2015	RESOLVED	PAUL PLOURD	751 LISBON ST	Marcel Lauze	Water / Sewer Division	751 LISBON ST
(8328220820) Sewer Back Up	2/23/2015	RESOLVED	TODD CLOUTIER	5 SHEFFIELD AVE	Marcel Lauze	Water / Sewer Division	5 SHEFFIELD AVE
(8307911548) Sewer Back Up	2/12/2015	RESOLVED	ANN	331 PINE STREET	Marcel Lauze	Water / Sewer Division	331 PINE ST
(8293940858) Sewer Back Up	2/9/2015	RESOLVED	PAM MAHEUX	50 COLTON AVE	Marcel Lauze	Water / Sewer Division	50 COLTON AVE
(8172511543) Sewer Back Up	12/26/2014	RESOLVED	DAVE KESTERSON	35 FIRST STREET	Jon Elie	Water / Sewer Division	35 FIRST ST
(8166570925) Sewer Back Up	12/23/2014	RESOLVED	ROBERT GAUVIN	45 LOWELL CT	Marcel Lauze	Water / Sewer Division	45 LOWELL CT *
(8070720940) Sewer Back Up	11/14/2014	RESOLVED	NORM POTVIN	77 POND RD	Marcel Lauze	Water / Sewer Division	77 POND RD
(8064541256) Sewer Back Up	11/12/2014	RESOLVED	PETER PESCHI	57 PROSPECT	Marcel Lauze	Water / Sewer Division	57 PROSPECT AVE
(8046571316) Sewer Back Up	11/5/2014	RESOLVED	RICHARD SAMSON	35 ALLEN AVE	Marcel Lauze	Water / Sewer Division	35 ALLEN AVE
(8036020846) Sewer Back Up	11/3/2014	RESOLVED	JOE DEYOUNG	26 PARKER STREET	Marcel Lauze	Water / Sewer Division	26 PARKER ST
(7924340818) Sewer Back Up	9/29/2014	RESOLVED	DAN MELANSON	32 ARKWRIGHT	Marcel Lauze	Water / Sewer Division	32 ARKWRIGHT AVE
(7901130826)	9/22/2014	RESOLVED	RICHARD	2 MOUNTVIEW	Ryan	Water / Sewer	2 MOUNTVIEW

Sewer Back Up			SAVIDIO	TERRACE	Barnes	Division	TERRACE
(7899671428) Sewer Back Up	9/21/2014	RESOLVED	EUGENE DROUIN	111 SCRIBNER BLVD	Marcel Lauze	Water / Sewer Division	111 SCRIBNER BLVD
(7892271231) Sewer Back Up	9/18/2014	RESOLVED	GENE DROUIN	111 SCRIBNER BLVD	Marcel Lauze	Water / Sewer Division	111 SCRIBNER BLVD
(7858311430) Sewer Back Up	9/9/2014	RESOLVED	ANGELA WILLIAMS	29 MARTHA	Marcel Lauze	Water / Sewer Division	29 MARTHA AVE
(7773461407) Sewer Back Up	8/15/2014	RESOLVED	ANNA HOLMES	57 BROOKS	Marcel Lauze	Water / Sewer Division	57 BROOKS AVE
(7768971249) Sewer Back Up	8/14/2014	RESOLVED	RICHARD OUELLETTE	15 ORCHARD CIRCLE	Marcel Lauze	Water / Sewer Division	15 ORCHARD CIR
(7768621156) Sewer Back Up	8/14/2014	RESOLVED	LISA CLOUTIER	79 MONTELLO	Marcel Lauze	Water / Sewer Division	79 MONTELLO ST
(7768581149) Sewer Back Up	8/14/2014	RESOLVED	MIKE RODRIQUE	45 ROBINSON GARDENS	Marcel Lauze	Water / Sewer Division	45 ROBINSON GARDENS
(7767410940) Sewer Back Up	8/14/2014	RESOLVED	GERARD LEBRUN	126 CAMPUS	Marcel Lauze	Water / Sewer Division	126 CAMPUS AVE
(7758980905) Sewer Back Up	8/12/2014	RESOLVED	STEVE ATWOOD	145 RIVER RD	Marcel Lauze	Water / Sewer Division	145 RIVER RD
(7751710822) Sewer Back Up	8/11/2014	RESOLVED	JASON RODRIGUEZ	91 PETTINGILL	Marcel Lauze	Water / Sewer Division	91 PETTINGILL ST
(7717731427) Sewer Back Up	7/31/2014	INPROGRESS	REBECCA HINKLEY	15 SPOFFORD	Marcel Lauze	Water / Sewer Division	15 SPOFFORD ST
(7701251153) Sewer Back Up	7/28/2014	RESOLVED	JENNIFER LANE	101 PIERCE STREET	Marcel Lauze	Water / Sewer Division	101 PIERCE ST
(7660530813) Sewer Back Up	7/17/2014	RESOLVED	SCOTT	38 MCNAMARA	Marcel Lauze	Water / Sewer Division	38 MCNAMARA ST
(7653911523) Sewer Back Up	7/15/2014	RESOLVED	RENE SAMSON	2 HALL ST	Marcel Lauze	Water / Sewer Division	2 HALL ST *
(7644380924) Sewer Back Up	7/14/2014	RESOLVED	CHRISTIE MORIN	150 NORTH TEMPLE ST	Marcel Lauze	Water / Sewer Division	150 NORTH TEMPLE ST
(7644370922) Sewer Back Up	7/14/2014	RESOLVED	NORM ALLEN	376 COLLEGE ST	Marcel Lauze	Water / Sewer Division	376 COLLEGE ST
(7613771000) Sewer Back Up	7/7/2014	RESOLVED	NANCY GAUTHIER	9 COLUMBIA ST	Marcel Lauze	Water / Sewer Division	9 COLUMBIA ST
(7567621318) Sewer Back Up	6/25/2014	RESOLVED	STEVE - DRAGON PRODUCTS	145 RIVER RD	Marcel Lauze	Water / Sewer Division	145 RIVER RD
(7545070852) Sewer Back Up	6/20/2014	RESOLVED	SARAH CONROY	31 STEVENS	Marcel Lauze	Water / Sewer Division	31 STEVENS ST

(7542491330) Sewer Back Up	6/19/2014	RESOLVED	JEANETTE	6 FARRELL ST	Marcel Lauze	Water / Sewer Division	6 FARRELL ST
(7461491412) Sewer Back Up	6/2/2014	RESOLVED	MR PEPIN	37 GENEST	Marcel Lauze	Water / Sewer Division	37 GENEST ST
(7458911206) Sewer Back Up	6/2/2014	RESOLVED	JENNIFER MCLAUGHLIN	20 HARKINS	Marcel Lauze	Water / Sewer Division	20 HARKINS DR
(7458751201) Sewer Back Up	6/2/2014	RESOLVED	JENN	703 SABATTUS ST	Marcel Lauze	Water / Sewer Division	703 SABATTUS ST
(7445131539) Sewer Back Up	5/29/2014	RESOLVED	RENE SAMSON	2 HALL STREET	Marcel Lauze	Water / Sewer Division	2 HALL ST *
(7428030810) Sewer Back Up	5/27/2014	RESOLVED	PAT LONG	35 TURGEON ST	Marcel Lauze	Water / Sewer Division	35 TURGEON ST
(7403010912) Sewer Back Up	5/20/2014	RESOLVED	DICK	9 HIGHLAND AVE	Marcel Lauze	Water / Sewer Division	9 HIGHLAND AVE
(7394410829) Sewer Back Up	5/19/2014	RESOLVED	FRANCIS BOLDUC	25 TURGEON	Marcel Lauze	Water / Sewer Division	25 TURGEON ST
(7394390827) Sewer Back Up	5/19/2014	RESOLVED	BRENDA BUSSIERE	104 SCRIBNER	Marcel Lauze	Water / Sewer Division	104 SCRIBNER BLVD
(7376091447) Sewer Back Up	5/13/2014	RESOLVED	MARY ANN WISE	4 MANNING AVE	Marcel Lauze	Water / Sewer Division	4 MANNING AVE
(7372510838) Sewer Back Up	5/13/2014	RESOLVED	NANCY TREMBLAY	49 WEBBER AVE	Marcel Lauze	Water / Sewer Division	49 WEBBER AVE
(7310590630) Sewer Back Up	4/28/2014	RESOLVED	COMM CENTER	SYLVAN AVE @ TAMPA ST	Marcel Lauze	Water / Sewer Division	SYLVAN AVE @ TAMPA ST *
(7291890932) Sewer Back Up	4/22/2014	RESOLVED	Norm St Denis	70 Hackett St	Marcel Lauze	Water / Sewer Division	70 HACKETT ST
(7280680956) Sewer Back Up	4/18/2014	RESOLVED	DAVE MOORE	14 BELLEVIEW	Marcel Lauze	Water / Sewer Division	14 BELLEVIEW AVE
(7272350840) Sewer Back Up	4/16/2014	RESOLVED	CUE SAREMI	46-48 ANDROSCOGGIN AVE	Marcel Lauze	Water / Sewer Division	46 ANDROSCOGGIN AVE
(7260810830) Sewer Back Up	4/14/2014	RESOLVED	SARAH BRENNICK	44 HIGHLAND SPRINGS RD	Marcel Lauze	Water / Sewer Division	44 HIGHLAND SPRING RD
(7254401146) Sewer Back Up	4/11/2014	RESOLVED	DIANE DOYON	31 ARKWRIGHT	Marcel Lauze	Water / Sewer Division	31 ARKWRIGHT AVE
(7242531528) Sewer Back Up	4/8/2014	RESOLVED	ARTHUR LAWRENCE	70 RIDEOUT AVE	Marcel Lauze	Water / Sewer Division	70 RIDEOUT AVE
(7217490859) Sewer Back Up	4/2/2014	RESOLVED	DANA RICKMAN	35 BARRON AVE	Marcel Lauze	Water / Sewer Division	35 BARRON AVE
(7210751447) Sewer Back Up	3/31/2014	RESOLVED	ERNEST MURRAY	9 READ STREET	Marcel Lauze	Water / Sewer	9 READ ST *

						Division	
(7198571246) Sewer Back Up	3/27/2014	RESOLVED	LAURIER ROY	540 LINCOLN ST	Marcel Lauze	Water / Sewer Division	540 LINCOLN ST
(7187181349) Sewer Back Up	3/24/2014	RESOLVED	VICKIE TREMBLEY	5 BRADLEY ST	Marcel Lauze	Water / Sewer Division	5 BRADLEY ST
(7164720941) Sewer Back Up	3/17/2014	RESOLVED	HENRY	61 ACADIA AVE	Marcel Lauze	Water / Sewer Division	61 ACADIA AVE
(7153820908) Sewer Back Up	3/13/2014	RESOLVED	KEVIN FISH	236 RUSSELL STREET	Marcel Lauze	Water / Sewer Division	236 RUSSELL ST
(7142160902) Sewer Back Up	3/10/2014	RESOLVED	TRACY	158 HIGHLAND AVE	Marcel Lauze	Water / Sewer Division	158 HIGHLAND AVE
(7129061008) Sewer Back Up	3/4/2014	RESOLVED	EMILIO ANDONAIDES	274 LISBON STREET	Marcel Lauze	Water / Sewer Division	274 LISBON ST *
(7121361146) Sewer Back Up	2/28/2014	RESOLVED	MR BLEAKNY	21 PINELAND ST	Marcel Lauze	Water / Sewer Division	51 PINELAND ST
(7120520838) Sewer Back Up	2/28/2014	RESOLVED	RICHARD THIBODEAU - KANGAROO DAY CARE	73 RIDEOUT AVE	Marcel Lauze	Water / Sewer Division	73 RIDEOUT AVE
(7115281520) Sewer Back Up	2/26/2014	RESOLVED	MARCEL NADEAU	386 LINCOLN STREET	Marcel Lauze	Water / Sewer Division	386 LINCOLN ST
(7115051447) Sewer Back Up	2/26/2014	RESOLVED	TYLER TYBERSKY	31 BURBANK STREET	Marcel Lauze	Water / Sewer Division	31 BURBANK ST
(7113271037) Sewer Back Up	2/26/2014	RESOLVED	GERRY WORTHINGTON	28 BARRON AVE	Marcel Lauze	Water / Sewer Division	28 BARRON AVE
(7113151031) Sewer Back Up	2/26/2014	RESOLVED	MARCEL NADEAU	386 LINCOLN ST	Marcel Lauze	Water / Sewer Division	386 LINCOLN ST
(7097501415) Sewer Back Up	2/21/2014	RESOLVED	CURT - MARTEL SCHOOL	LISBON ST	Marcel Lauze	Water / Sewer Division	LISBON @ EAST AVE *
(7093091402) Sewer Back Up	2/20/2014	RESOLVED	LUCAS	FALCON RD	Marcel Lauze	Water / Sewer Division	FALCON ROAD *
(7082321027) Sewer Back Up	2/18/2014	SUBMITTED	FLORENCE BLOUIN OR KATHY ANCTIL (daughter)	219 OAK STREET	Justin Early	Water / Sewer Division	219 OAK ST
(7060321614) Sewer Back Up	2/7/2014	RESOLVED	STEPHANIE FISCHER	44 DIMSDALE	Marcel Lauze	Water / Sewer Division	44 DIMSDALE AVE
(7013831038) Sewer Back Up	1/23/2014	RESOLVED	ASHLEY DOWDY	95 WEBBER AVE	Marcel Lauze	Water / Sewer Division	95 WEBBER AVE
(6999100716) Sewer Back Up	1/17/2014	RESOLVED	JEREMY BERNARD	9 HOLY FAMILY ST	Marcel Lauze	Water / Sewer Division	9 HOLY FAMILY ST
(6976880743) Sewer Back Up	1/10/2014	RESOLVED	MARK - PROPERTY	27 MARSTON ST	Marcel Lauze	Water / Sewer	27 MARSTON ST

			MNGT			Division	
(6962221217) Sewer Back Up	1/6/2014	RESOLVED	RICHARD BENEDICT	26 CASSELL ST	Marcel Lauze	Water / Sewer Division	26 CASSELL ST
(6932631217) Sewer Back Up	12/22/2013	RESOLVED	LISA MICHAUD	12 BAIRD AVE	Marcel Lauze	Water / Sewer Division	12 BAIRD AVE
(6903611347) Sewer Back Up	12/9/2013	RESOLVED	JAMES GAUTHIER	67 BOSTON AVE	Marcel Lauze	Water / Sewer Division	67 BOSTON AVE
(6887511021) Sewer Back Up	12/2/2013	RESOLVED	DENISE CHAPUT	87 WEBBER AVE	Marcel Lauze	Water / Sewer Division	87 WEBBER AVE
(6854301312) Sewer Back Up	11/14/2013	RESOLVED	SUSAN BOWEN	WEBBER AVE	Marcel Lauze	Water / Sewer Division	192 WEBBER AVE
(6828531247) Sewer Back Up	11/5/2013	RESOLVED	ROBIN DANFORTH	95 MARBLE ST	Marcel Lauze	Water / Sewer Division	95 MARBLE ST
(6798410929) Sewer Back Up	10/28/2013	RESOLVED	IRENE OUELLETTE	30 ROSEDALE ST	Marcel Lauze	Water / Sewer Division	30 ROSEDALE ST
(6785790644) Sewer Back Up	10/23/2013	RESOLVED	DR KIPPAX	501 MAIN ST	Marcel Lauze	Water / Sewer Division	501 MAIN ST
(6778291423) Sewer Back Up	10/21/2013	RESOLVED		POND RD	Marcel Lauze	Water / Sewer Division	27 POND RD
(6710461250) Sewer Back Up	9/30/2013	RESOLVED	MATT LAJOIE	12 WESTMINSTER ST	Marcel Lauze	Water / Sewer Division	12 WESTMINSTER ST
(6684810932) Sewer Back Up	9/23/2013	RESOLVED	Matt Bodwell	18 Melody Lane	Marcel Lauze	Water / Sewer Division	18 MELODY LN
(6604041532) Sewer Back Up	8/29/2013	RESOLVED	Gary Rogers	117 Oak St	Justin Early	Water / Sewer Division	117 OAK ST
(6532430831) Sewer Back Up	8/12/2013	RESOLVED	Mark Bellanson	25 / 27 Marston St	Dick Morin	Water / Sewer Division	25 MARSTON ST
(6499411256) Sewer Back Up	8/2/2013	RESOLVED	Muriel Violet	195 Montello St	Marcel Lauze	Water / Sewer Division	195 MONTELLO ST
(6478501220) Sewer Back Up	7/29/2013	RESOLVED	MRS BELGARDE	15 BELLGARDE AVE	Marcel Lauze	Water / Sewer Division	15 BELLEGARDE AVE
(6431461038) Sewer Back Up	7/18/2013	RESOLVED	ANGELA GRENIER	65 BAIRD AVE	Marcel Lauze	Water / Sewer Division	65 BAIRD AVE
(6312901252) Sewer Back Up	6/21/2013	RESOLVED	DENNIS LEBLOND	21 PERLEY ST	Marcel Lauze	Water / Sewer Division	21 PERLEY ST
(6214821305) Sewer Back Up	5/31/2013	RESOLVED	Roanne Dunham	64 Dow Ave	Marcel Lauze	Water / Sewer Division	64 DOW AVE
(6072640925) Sewer Back Up	4/29/2013	RESOLVED	Evaline Greenlaw	56 Tampa St	Marcel Lauze	Water / Sewer Division	56 TAMPA ST
						Water /	

(6025761109) Sewer Back Up	4/16/2013	RESOLVED	KELLY BROWN	167 PETTINGILL ST	Marcel Lauze	Sewer Division	167 PETTINGILL ST
(6015751502) Sewer Back Up	4/12/2013	RESOLVED	LARRY	65 WOOD ST	Marcel Lauze	Water / Sewer Division	65 WOOD ST
(5968311501) Sewer Back Up	3/28/2013	RESOLVED	Carol Dilley	31 Googin St	Marcel Lauze	Water / Sewer Division	31 GOOGIN ST
(5944861001) Sewer Back Up	3/20/2013	RESOLVED	DENIS	10 HAWTHORNE PLACE	Marcel Lauze	Water / Sewer Division	10 HAWTHORNE PL
(5920590810) Sewer Back Up	3/12/2013	RESOLVED	CARMEN COHEN	317 CENTRAL AVE	Marcel Lauze	Water / Sewer Division	317 CENTRAL AVE
(5876211609) Sewer Back Up	2/21/2013	RESOLVED	Scott St. Pierre	88 Acadia Ave	Marcel Lauze	Water / Sewer Division	88 ACADIA AVE
(5876201608) Sewer Back Up	2/21/2013	RESOLVED	David Noyes	15 Riley St	Marcel Lauze	Water / Sewer Division	15 RILEY ST
(5851641057) Sewer Back Up	2/12/2013	RESOLVED	NORMA FONTAINE	282 RUSSELL ST	Marcel Lauze	Water / Sewer Division	282 RUSSELL ST
(5851180937) Sewer Back Up	2/12/2013	RESOLVED	ROSE PELLETIER	68 STEVENS ST	Marcel Lauze	Water / Sewer Division	68 STEVENS ST
(5832590947) Sewer Back Up	2/5/2013	RESOLVED	Terry Paquette	400 College St	Marcel Lauze	Water / Sewer Division	400 COLLEGE ST
(5819940815) Sewer Back Up	1/31/2013	RESOLVED	JANICE	194 CENTRAL AVE	Marcel Lauze	Water / Sewer Division	194 CENTRAL AVE
(5736421559) Sewer Back Up	12/26/2012	RESOLVED	Jeff Doucette	381 East Ave	Marcel Lauze	Water / Sewer Division	381 EAST AVE
(5734871003) Sewer Back Up	12/26/2012	RESOLVED	David Cyr	290 Pond Rd	Marcel Lauze	Water / Sewer Division	290 POND RD
(5734770935) Sewer Back Up	12/26/2012	RESOLVED	FAITH MORSE	190 COLLEGE ST	Marcel Lauze	Water / Sewer Division	190 COLLEGE ST
(5719030814) Sewer Back Up	12/17/2012	RESOLVED	JENNIFER CHASSE	1353 SABATTUS ST	Marcel Lauze	Water / Sewer Division	1353 SABATTUS ST
(5708911532) Sewer Back Up	12/11/2012	RESOLVED	Imelda Roux	39 Goddard Rd	Marcel Lauze	Water / Sewer Division	39 GODDARD RD
(5624461453) Sewer Back Up	11/7/2012	RESOLVED	Eric Norgen	300 East Ave	Marcel Lauze	Water / Sewer Division	300 EAST AVE
(5613550925) Sewer Back Up	11/5/2012	RESOLVED	Carmel Daigle	79 Sherbrooke Ave	Marcel Lauze	Water / Sewer Division	79 SHERBROOKE AVE
(5472040830) Sewer Back Up	9/27/2012	RESOLVED	JAMES KOCH - PHIL NADEAU	11 MOREAU AVE	Marcel Lauze	Water / Sewer Division	11 MOREAU AVE
(5358840846) Sewer Back Up	8/31/2012	RESOLVED	MR FARNUM	750 WEBSTER ST	Marcel Lauze	Water / Sewer Division	750 WEBSTER ST

(5296361410) Sewer Back Up	8/16/2012	RESOLVED	Amy Lemay	23 Bolduc St.	Marcel Lauze	Water / Sewer Division	23 BOLDUC ST
(5285860811) Sewer Back Up	8/14/2012	RESOLVED	CYSTAL BROWN	115 SUMMER ST	Marcel Lauze	Water / Sewer Division	115 SUMMER ST
(5145341059) Sewer Back Up	7/11/2012	RESOLVED	Dan - TOLLMAN ASSOCIATES	240 RUSSELL ST	Marcel Lauze	Water / Sewer Division	240 RUSSELL ST
(5087691128) Sewer Back Up	6/26/2012	RESOLVED	Maria Berube	74 Rosedale St.	Marcel Lauze	Water / Sewer Division	74 ROSEDALE ST
(5087201037) Sewer Back Up	6/26/2012	RESOLVED	Shawn Arel	257 Park St.	Marcel Lauze	Water / Sewer Division	257 PARK ST
(4983180928) Sewer Back Up	6/3/2012	RESOLVED	CATHY	5 HOLY FAMILY ST	Marcel Lauze	Water / Sewer Division	5 HOLY FAMILY ST
(4980401518) Sewer Back Up	6/1/2012	RESOLVED	Fred Greenwood	32 Davis St.	Marcel Lauze	Water / Sewer Division	32 DAVIS ST
(4949791016) Sewer Back Up	5/25/2012	RESOLVED	JUFY TRAFFORD	18 GERMAINE ST	Marcel Lauze	Water / Sewer Division	18 GERMAINE ST
(4887820757) Sewer Back Up	5/10/2012	RESOLVED	CHRIS SHEPARD	12 MANNING PLACE	Marcel Lauze	Water / Sewer Division	12 MANNING PL
(4841741152) Sewer Back Up	4/27/2012	RESOLVED	Mrs. Serois	39 Montello St.	Marcel Lauze	Water / Sewer Division	39 MONTELLO ST
(4840720921) Sewer Back Up	4/27/2012	RESOLVED	Steven Sampson	29 Chadbourne Rd.	Marcel Lauze	Water / Sewer Division	29 CHADBOURNE RD
(4828350846) Sewer Back Up	4/24/2012	RESOLVED	JOLINE PELLETIER	40 CRAM AVE	Marcel Lauze	Water / Sewer Division	40 CRAM AVE
(4810671536) Sewer Back Up	4/18/2012	RESOLVED	Jeremy Thibault	5 Blanchette St.	Marcel Lauze	Water / Sewer Division	5 BLANCHETTE ST
(4779361109) Sewer Back Up	4/10/2012	RESOLVED	Real Perrault	30 Rita Ave.	Marcel Lauze	Water / Sewer Division	30 RITA AVE
(4755450809) Sewer Back Up	4/3/2012	RESOLVED	BRIAN LAFONTAINE	48 OLD GREENE RD	Marcel Lauze	Water / Sewer Division	48 OLD GREENE RD
(4721001151) Sewer Back Up	3/23/2012	RESOLVED	Algin Physic	99 Morse Ave.	Marcel Lauze	Water / Sewer Division	99 MORRIS AVE
(4720701059) Sewer Back Up	3/23/2012	RESOLVED	Paul Poirrier	5 Brentwood Ave.	Marcel Lauze	Water / Sewer Division	5 BRENTWOOD AVE
(4688641322) Sewer Back Up	3/13/2012	RESOLVED	RITA BEAULIEU	38 MARK ST	Marcel Lauze	Water / Sewer Division	38 MARK ST
(4664731428) Sewer Back Up	3/5/2012	RESOLVED	NORM L''HEUREAUX	13 LIBBY AVE	Marcel Lauze	Water / Sewer Division	13 LIBBY AVE
(4638891500)					Marcel	Water / Sewer	

Sewer Back Up	2/24/2012	RESOLVED	Richard Doyle	506 Lincoln St.	Lauze	Division	506 LINCOLN ST
(4617871416) Sewer Back Up	2/16/2012	RESOLVED	Nicholas Theriault	87 Webster St.	Marcel Lauze	Water / Sewer Division	87 WEBSTER ST *
(4568871225) Sewer Back Up	1/31/2012	RESOLVED	MIKE JILSON	148 SABATTUS ST	Marcel Lauze	Water / Sewer Division	148 SABATTUS ST
(4562121403) Sewer Back Up	1/27/2012	RESOLVED	Richard Dahlquist	39 Avon St.	Marcel Lauze	Water / Sewer Division	39 AVON ST
(4555061058) Sewer Back Up	1/25/2012	RESOLVED	CHRIS	13 ACADIA ST	Marcel Lauze	Water / Sewer Division	13 ACADIA AVE
(4491830822) Sewer Back Up	12/29/2011	RESOLVED	RICHARD DAHLQUIST	39 AVON ST	Marcel Lauze	Water / Sewer Division	39 AVON ST
(4489390946) Sewer Back Up	12/28/2011	RESOLVED	Pete Alberta	53 West Bates St.	Marcel Lauze	Water / Sewer Division	53 WEST BATES ST
(4475681435) Sewer Back Up	12/19/2011	RESOLVED	ANDREW KNIGHT	66 RIVERSIDE ST	Marcel Lauze	Water / Sewer Division	66 RIVERSIDE ST
(4438090726) Sewer Back Up	12/2/2011	RESOLVED	MRS CHAMPAGNE	28 WALKER AVE	Ryan Barnes	Water / Sewer Division	28 WALKER AVE *
(4437571606) Sewer Back Up	12/1/2011	RESOLVED	Patricia Champain	28 Walker Ave.	Ryan Barnes	Water / Sewer Division	28 WALKER AVE
(4426221426) Sewer Back Up	11/28/2011	RESOLVED	PAUL COTE	75 BAILEY AVE	Marcel Lauze	Water / Sewer Division	75 BAILEY AVE
(4426131416) Sewer Back Up	11/28/2011	RESOLVED	BRENDA LEIGHTON	70 BAILEY AVE	Marcel Lauze	Water / Sewer Division	70 BAILEY AVE
(4413391255) Sewer Back Up	11/21/2011	RESOLVED	Daryell Healed	474 College St.	Marcel Lauze	Water / Sewer Division	474 COLLEGE ST
(4413341243) Sewer Back Up	11/21/2011	RESOLVED	Dan Levassure	540 Sabattus St.	Marcel Lauze	Water / Sewer Division	540 SABATTUS ST
(4376821417) Sewer Back Up	11/7/2011	RESOLVED	Doris Biel	21 Roger St.	Marcel Lauze	Water / Sewer Division	21 ROGER ST
(4369091612) Sewer Back Up	11/4/2011	RESOLVED	MIDGE	30 PEARL ST	Marcel Lauze	Water / Sewer Division	MALO near Talon St *
(4338411234) Sewer Back Up	10/27/2011	RESOLVED	STEVE - EDWARDS RESTAURANT	750 MAIN ST	Marcel Lauze	Water / Sewer Division	750 MAIN ST *
(4337150733) Sewer Back Up	10/27/2011	RESOLVED	LORRAINE CASO	38 JEFFERSON	Marcel Lauze	Water / Sewer Division	38 JEFFERSON ST
(4309001600) Sewer Back Up	10/18/2011	RESOLVED	Maurice Chabot	33 Switzerland Rd.	Marcel Lauze	Water / Sewer Division	33 SWITZERLAND RD
(4282451100) Sewer Back Up	10/11/2011	RESOLVED	Marc Fournier	63 Fair St.	Marcel Lauze	Water / Sewer Division	63 FAIR ST

(4214831201) Sewer Back Up	9/22/2011	RESOLVED	Scott Webster	29 Simard Ave.	Marcel Lauze	Water / Sewer Division	29 SIMARD AVE
(4142911333) Sewer Back Up	9/2/2011	RESOLVED	Darcy Labonte	31 Hamel St.	Marcel Lauze	Water / Sewer Division	31 HAMEL ST
(4142681316) Sewer Back Up	9/2/2011	RESOLVED	BILL LOCKE	201 MONTELLO ST	Marcel Lauze	Water / Sewer Division	201 MONTELLO ST
(4081781230) Sewer Back Up	8/18/2011	RESOLVED	DON GOUDREAU	40 LABBE ST	Marcel Lauze	Water / Sewer Division	40 LABBE AVE
(4071040920) Sewer Back Up	8/16/2011	RESOLVED	TINA	89 CRAM AVE	Marcel Lauze	Water / Sewer Division	89 CRAM AVE
(4067821325) Sewer Back Up	8/15/2011	RESOLVED	SHERRIE - MARSHWOODS NURSHING HOME	33 ROGER ST	Marcel Lauze	Water / Sewer Division	33 ROGER ST
(4035581537) Sewer Back Up	8/8/2011	RESOLVED	Zack Stewart	204/206 Sabattus St.	Marcel Lauze	Water / Sewer Division	204 SABATTUS ST
(4012530946) Sewer Back Up	8/2/2011	RESOLVED	PATRICK REEDER	4 VENTURA ST	Marcel Lauze	Water / Sewer Division	4 VENTURA ST
(3965001025) Sewer Back Up	7/21/2011	RESOLVED	JANICE COTE	24 ROBINSON GARDENS	Marcel Lauze	Water / Sewer Division	24 ROBINSON GARDENS
(3947830735) Sewer Back Up	7/18/2011	RESOLVED	SCOTT CLOUTIER	21 VALLEY ST	Marcel Lauze	Water / Sewer Division	21 VALLEY ST
(3939791302) Sewer Back Up	7/14/2011	RESOLVED	NAOMI	5 SHAWMUT ST	Marcel Lauze	Water / Sewer Division	5 SHAWMUT ST
(3857821113) Sewer Back Up	6/23/2011	RESOLVED	JOYCE TURCOTTE	64 BOSTON AVE	Marcel Lauze	Water / Sewer Division	64 BOSTON AVE
(3826731246) Sewer Back Up	6/16/2011	RESOLVED	PAULINE ELLIS	162 HORTON ST	Marcel Lauze	Water / Sewer Division	162 HORTON ST
(3818191331) Sewer Back Up	6/14/2011	RESOLVED	FRANK	123 MONTELLO ST	Marcel Lauze	Water / Sewer Division	123 MONTELLO ST
(3806410845) Sewer Back Up	6/13/2011	RESOLVED	IRENE OUELLETTE	30 ROSEDALE ST	Marcel Lauze	Water / Sewer Division	30 ROSEDALE ST
(3713031126) Sewer Back Up	5/19/2011	RESOLVED	PAULINE PLOURD	5 TUCKER ST	Marcel Lauze	Water / Sewer Division	5 TUCKER ST
(3708841127) Sewer Back Up	5/18/2011	RESOLVED	TONI	21 NANCY ST	Marcel Lauze	Water / Sewer Division	21 NANCY ST
(3688841241) Sewer Back Up	5/12/2011	RESOLVED	LISA MARTIN	29 SARGENT AVE	Marcel Lauze	Water / Sewer Division	29 SARGENT AVE
(3553521041) Sewer Back Up	4/11/2011	RESOLVED	Irene Ouellette	30 Rosedale St.	Marcel Lauze	Water / Sewer Division	30 ROSEDALE ST
						Water /	

(3542731025) Sewer Back Up	4/8/2011	RESOLVED	KEN HODGKINS	29 VALE ST	Marcel Lauze	Sewer Division	29 VALE ST
(3506521104) Sewer Back Up	3/29/2011	RESOLVED	TERRY FROST	171 GROVE ST	Marcel Lauze	Water / Sewer Division	171 GROVE ST
(3484850905) Sewer Back Up	3/23/2011	RESOLVED	ROBERT AKERLEY	44 TAMPA ST	Marcel Lauze	Water / Sewer Division	44 TAMPA ST
(3459391340) Sewer Back Up	3/14/2011	RESOLVED	CHRIS POUND	685 SABATTUS ST	Marcel Lauze	Water / Sewer Division	685 SABATTUS ST
(3450991055) Sewer Back Up	3/10/2011	RESOLVED	KEITH	56 JONES AVE	Marcel Lauze	Water / Sewer Division	56 JONES AVE
(3420471833) Sewer Back Up	2/25/2011	RESOLVED	BETH HANES	88 HOLLAND ST	Marcel Lauze	Water / Sewer Division	88 HOLLAND ST
(3340981408) Sewer Back Up	1/26/2011	RESOLVED	TIM GAGNON	54 ALBERT ST	Marcel Lauze	Water / Sewer Division	54 ALBERT ST
(3306800910) Sewer Back Up	1/11/2011	RESOLVED	RICHARD GREGOIRE	55 BIRON AVE	Marcel Lauze	Water / Sewer Division	55 BIRON AVE
(3276951005) Sewer Back Up	12/28/2010	RESOLVED	Mrs. Hinkley	15 Spofford St.	Marcel Lauze	Water / Sewer Division	15 SPOFFORD ST
(3266551502) Sewer Back Up	12/20/2010	RESOLVED	Ron Dion	62 Boston Ave.	Marcel Lauze	Water / Sewer Division	62 BOSTON AVE
(3262320614) Sewer Back Up	12/17/2010	RESOLVED	KAREN CONWAY	17 DAVIS ST	Marcel Lauze	Water / Sewer Division	17 DAVIS ST
(3257480735) Sewer Back Up	12/15/2010	RESOLVED	LORENA DUBOIS	376 POND RD	Marcel Roy	Public Works	376 POND RD
(3252271000) Sewer Back Up	12/13/2010	RESOLVED	MR JAMES	151 GROVE ST	Marcel Lauze	Water / Sewer Division	151 GROVE ST
(3242591346) Sewer Back Up	12/7/2010	RESOLVED	CLAYTON BARKER	17 ORANGE ST	Marcel Lauze	Water / Sewer Division	17 ORANGE ST
(3241420914) Sewer Back Up	12/7/2010	RESOLVED	VIRGINIA TUDOR	5 BRADLEY ST	Marcel Lauze	Water / Sewer Division	5 BRADLEY ST
(3227091015) Sewer Back Up	12/1/2010	RESOLVED	Donald Morin	67 Farwell St.	Marcel Lauze	Water / Sewer Division	67 FARWELL ST
(3224071008) Sewer Back Up	11/30/2010	RESOLVED	MRS JOSEPH CONLEY	4 CHAMPLAINE AVE	Marcel Lauze	Water / Sewer Division	4 CHAMPLAIN AVE
(3209781309) Sewer Back Up	11/19/2010	RESOLVED	MR LAWRENCE	70 RIDEOUT AVE	Marcel Lauze	Water / Sewer Division	70 RIDEOUT AVE
(3204241158) Sewer Back Up	11/17/2010	RESOLVED	RESIDENT	100 PINE ST	Marcel Lauze	Water / Sewer Division	100 PINE ST
(3200880904) Sewer Back Up	11/16/2010	RESOLVED	PAULINE	13 GROVEMOUNT LANE	Marcel Lauze	Water / Sewer Division	13 GROVEMOUNT LN

(3182810918) Sewer Back Up	11/8/2010	RESOLVED	CAROL	307 WEBBER AVE	Marcel Lauze	Water / Sewer Division	307 WEBBER AVE
(3142161137) Sewer Back Up	10/22/2010	RESOLVED	JEANNETTE	77 RIDEOUT AVE	Marcel Lauze	Water / Sewer Division	77 RIDEOUT AVE *
(3125281508) Sewer Back Up	10/15/2010	RESOLVED	Michael Henson	17 Green St.	Marcel Lauze	Water / Sewer Division	17 GREEN ST
(3033560823) Sewer Back Up	9/17/2010	RESOLVED	CRAIG JOHNSON	65 BAILEY AVE	Marcel Lauze	Water / Sewer Division	65 BAILEY AVE
(2977441416) Sewer Back Up	8/30/2010	RESOLVED	Caren Conway	17 Davis Street	Kevin Gagne	Water / Sewer Division	17 DAVIS ST
(2954111524) Sewer Back Up	8/23/2010	RESOLVED	Dick Roy	181 Russell St.	Marcel Lauze	Water / Sewer Division	181 RUSSELL ST *
(2903040940) Sewer Back Up	8/9/2010	RESOLVED	MRS LEMIEUX	232 LINCOLN ST	Marcel Lauze	Water / Sewer Division	232 LINCOLN ST
(2887761211) Sewer Back Up	8/3/2010	RESOLVED	Nancy Fyke	31 Forest Ave.	Marcel Lauze	Water / Sewer Division	31 FOREST ST
(2844880936) Sewer Back Up	7/22/2010	RESOLVED	JOHN HEUTZ	176 ROSEDALE ST	Kevin Gagne	Water / Sewer Division	176 ROSEDALE ST
(2685931139) Sewer Leak	6/8/2010	RESOLVED	LANNIE CHRISTENSEN	98 PIERCE ST	Marcel Lauze	Water / Sewer Division	98 PIERCE ST
(2617261204) Sewer Leak	5/20/2010	RESOLVED		177 RIDEOUT AVE	Marcel Lauze	Water / Sewer Division	170 RIDEOUT AVE
(2304990901) Sewer Leak	1/26/2010	RESOLVED	RON CROTEAU	20 NEWMAN ST	Kevin Gagne	Water / Sewer Division	20 NEWMAN ST
(1823251446) Sewer Leak	7/7/2009	RESOLVED	GABE GIGUERE	39 WHITE ST	Kevin Gagne	Water / Sewer Division	39 WHITE ST
(1819391548) Sewer Leak	7/6/2009	RESOLVED	CHARLES BOURNAKEL	68 BARDWELL ST	Kevin Gagne	Water / Sewer Division	68 BARDWELL ST
(1819361546) Sewer Leak	7/6/2009	RESOLVED	RODNEY STROUT	63 BARDWELL ST.	Kevin Gagne	Water / Sewer Division	63 BARDWELL ST
(1568281215) Sewer Leak	4/22/2009	RESOLVED	MARTIN MORGAN	24 VENTURA ST	Marcel Lauze	Water / Sewer Division	24 VENTURA ST
(1129511304) Sewer Leak	9/22/2008	RESOLVED	PAULINE BAITA	111 WINTER ST	Marcel Lauze	Water / Sewer Division	111 WINTER ST
(1124701018) Sewer Leak	9/19/2008	RESOLVED	NORM CUSSON	18 BRADLEY ST	Marcel Lauze	Water / Sewer Division	18 BRADLEY ST *
(1031930945) Sewer Leak	8/13/2008	WAITING	EMILY GARLAND	37 WHITE ST	Marcel Lauze	Water / Sewer Division	*
(984601059) Sewer Leak	7/25/2008	RESOLVED	RICHARD LOCUST	20 HIGHLAND AVE	Marcel Lauze	Water / Sewer	*

Division

EXHIBIT 5

Select EGov Sewer Backup Records

(chosen from list in Exhibit 3)

Work Order Form

Sewer Back Up

Tracking Number: 9175982233
Date Time Received: 9/30/2015 10:33PM
Created By: Rose Dufour (Admin Employee)

Contact Information

First Name: KAREN -
Last Name: RENY PROPERTY MNGT
Business Name:
Email:
Daytime Phone: 783-2199
Fax:
Address: 3 HOLY FAMILY ST
City: LEWISTON
State: ME
Zip: 04240
Country:

Issue Location

Street: 3 HOLY FAMILY ST
Unit:
City: LEWISTON
State: ME
Zip: 04240
Comments:

Request Details

Nature of the complaint/suggestion...
SEWER IS PLUGGED UP IN ROADWAY BY MANHOLE PER ABLE POWER ROOTER - VOICE MESSAGE CAME IN AT 4:42 PM - NOT SURE IF STANDBY MAN GOT THIS CALL - THEY WERE CLOSED WHEN I CALLED AT 10 PM. ***I DID LEAVE A MESSAGE THAT IF NOT ADDRESSED THEY COULD REACH STANDBY MAN BY CALLING THE EMERGENCY TEL #****

Request Activity

10/05/2015 6:56 AM -- Marcel Lauze - RESOLVED
-----Internal Note: This was due to the heavy rains
9/30/2015 10:35 PM -- Rose Dufour - SUBMITTED
-----Internal Note: This item has been re-assigned to Marcel Lauze.
9/30/2015 10:35 PM -- Rose Dufour - SUBMITTED
-----Internal Note: Edit Request Form: Nature of the complaint/suggestion... "SEWER IS PLUGGED UP IN ROADWAY BY MANHOLE PER ABLE POWER ROOTER - VOICE MESSAGE CAME IN AT 4:42 PM - NOT SURE IF STANDBY MAN GOT THIS CALL - THEY WERE CLOSED WHEN I CALLED AT 10 PM " changed to "SEWER IS PLUGGED UP IN ROADWAY BY MANHOLE PER ABLE POWER ROOTER - VOICE MESSAGE CAME IN AT 4:42 PM - NOT SURE IF STANDBY MAN GOT THIS CALL - THEY WERE CLOSED WHEN I CALLED AT 10 PM. ***I DID LEAVE A MESSAGE THAT IF NOT ADDRESSED THEY COULD REACH STANDBY MAN BY CALLING THE EMERGENCY TEL #****"
9/30/2015 10:33 PM -- Rose Dufour - SUBMITTED

Work Order Form

Sewer Back Up

Tracking Number: 9175982233
Date Time Received: 9/30/2015 10:33PM
Created By: Rose Dufour (Admin Employee)

-----Internal Note: This request was submitted by Rose Dufour.

9/30/2015 10:33PM -- Rose Dufour (Admin Employee) - SUBMITTED

Work Order Form

Sewer Back Up

Tracking Number: 9175982233
Date Time Received: 9/30/2015 10:33PM
Created By: Rose Dufour (Admin Employee)

Comments:

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Date Authorized Signature

Work Order Form

Sewer Back Up

Tracking Number: 8769291203
Date Time Received: 6/16/2015 12:03PM
Created By: Debra Clarke (Admin Employee)

Contact Information

First Name: DICK
Last Name: MORIN
Business Name: LPW
Email:
Daytime Phone:
Fax:
Address: GENDRON DRIVE
City: LEWISTON
State: ME
Zip: 04240
Country:

Issue Location

Street: GENDRON DRIVE
Unit:
City: Lewiston
State: ME
Zip: 04240
Comments:

Request Details

Nature of the complaint/suggestion...
SEWR BACK UP IN THE ROAD

Request Activity

7/08/2015 9:32 AM -- Marcel Lauze - RESOLVED
-----Internal Note: Back up was resolved
6/16/2015 12:04 PM -- Debra Clarke - SUBMITTED
-----Internal Note: This item has been re-assigned to Marcel Lauze.
6/16/2015 12:03 PM -- Debra Clarke - SUBMITTED
-----Internal Note: This request was submitted by Debra Clarke.
6/16/2015 12:03PM -- Debra Clarke (Admin Employee) - SUBMITTED

Work Order Form

Sewer Back Up

Tracking Number: 8769291203
Date Time Received: 6/16/2015 12:03PM
Created By: Debra Clarke (Admin Employee)

Comments:

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Date Authorized Signature

EXHIBIT 6

IT Pipes Screen Grab for Pipe ID 3524

ViewIT

Reports: 5339-5340_custom.pdf

00:00:08

Volume:

Asset

Pipe Segment Reference	3524
Project	2015 Contract
City	Lewiston ME
Street	Sabattus St
Location Code	Light Highway
Location Details	
Sewer Use	Sanitary
Drainage Area	
Year Laid	
Year Renewed	
Owner	
Total Length	190
Upstream MH	5339
Up Rim to Invert	
Up Grade to Invert	
Up Rim to Grade	
Downstream MH	5340
Down Rim to Invert	
Down Grade to Invert	
Down Rim to Grade	
Material	Vitrified Clay Pipe
Shape	Circular
Width	12
Height	12
Pipe Joint Length	
Lining Method	
Sewer Category	

Inspection

Surveyed By	Brian_Turcotte
Certificate Number	U-214-06020390
Date	8/5/2015 12:00:00 AM
Purpose	Routine Assessment
Pre-Cleaning	Heavy Cleaning
Direction	Downstream
Media label	1
Weather	Dry
PO Number	
Work Order	M-15-021
Length surveyed	190

Distance	Description	Value 1	Value 2	Joint	Clock 1	Clock 2	Grade	Remarks
0	Manhole			☐	0	0	0	5339
0	Water Level			☐	0	0	0	
53.9	Crack Spiral			☑	11	1	2	
74.4	Deposits Attached Grease			☐	4	8	2	
82.2	General Observation			☐	0	0	0	Grease Jetting To Clean
85.8	Tap Factory	4		☐	10	0	0	
91.4	Camera Underwater			☐	0	0	4	
95	Crack Multiple			☑	12	12	3	
95	Water Level Sag			☐	0	0	2	
99.7	Tap Break-in	4		☐	2	0	0	
179.9	Tap Break-in	4		☐	2	0	0	
184.2	Tap Break-in	6		☐	12	0	0	
184.2	Broken Pipe Void Visible			☐	2	5	5	
185.5	Fracture Multiple			☐	1	5	4	
190	Manhole			☐	0	0	0	5340

LEWISTON SEWER DIVISION
OPERATIONS AND MAINTENANCE PLAN

SANITARY SEWER SYSTEM DESCRIPTION

The Lewiston combined sewer system services approximately 16 square miles of land within the 35.45 square mile corporate City limits, serving a population of 32,258 residents (or 88% of Lewiston population) according to the 2010 census. Lewiston sewer collection system is comprised of approximately 152 miles of sanitary and combined (storm and sanitary) sewers with approximately 26 miles of the collection system as combined sewer (storm and sanitary).
Other significant statistics of the City of Lewiston combined sewer system include:

- Annual average precipitation: 42 inches
- Miles of gravity sewer(sanitary and combined): 146 ranging in size from 4 inches to 48 inches in diameter
- 3,009 manholes
- Interceptor sewers and pump stations are operated and maintained by Lewiston Public Works Sewer Division staff.
- The wastewater treatment facility – Lewiston Auburn Water Pollution Control Authority (LAWPCA) is operated and maintained by LAWPCA staff.

SANITARY SEWER SYSTEM FUNDING

The City of Lewiston's sanitary sewer system is funded by a utility fee based on potable water consumption. The utility fee provides a dedicated source of funds for the operation, maintenance, rehabilitation, and improvement of the City's sanitary and combined sewer system. Because the sanitary sewer utility fee is a user fee and not a tax, all properties regardless of ownership are required to pay for the services provided by the City's sanitary sewer system. This includes non-profit entities such as churches, schools and institutions, as well as properties owned by the City of Lewiston, the State of Maine, as well as the federal government.

In 1974 the City Council approved the creation of a sanitary sewer utility fee. Under the utility structure, all users of the sanitary sewer system are charged based on the amount they discharge, with the charges calculated to recover the full cost of operating, maintaining, rehabilitating, and improving the sanitary sewer collection system. The sanitary sewer utility fee is calculated by taking the quarterly volume of water used multiplied by the fee rate.
Significant statistics from the sanitary sewer utility fee based on 2014 fiscal year (7/1/2013
to 6/30/2014) financial data include:

- 8,6611 customers billed
- $ 5,075,700 in utility fees generated

- Fee rate of $2.12 per 100 cubic feet up to 800 cubic feet of quarterly water consumption; $3.51 per 100 cubic feet above 800 cubic feet of quarterly water consumption.

STAFFING PLAN

The Public Works Department is staffed during the hours of 7:00 A.M. to 4:00 P.M. on Monday through Friday. After the normal working hours, there is always one employee on-call (Standby Person) covering any responses for the Public Works Water and Sewer Division specifically responsible for the sanitary sewer collection system. Calls to the Public Works Department after normal working hours are routed to the Lewiston Auburn 911 Communication Center (Comm Center) dispatch staff. The Comm Center staff contact the on-call Water and Sewer Standby employee to respond to any reported problems related to the sanitary and combined sewer system.
To insure quick, reliable notification of a problem, a mobile telephone is carried by the on-call (Standby Person) staff.

SPECIFIC STAFFING

The City of Lewiston Water and Sewer Divisions of Public Works Department is staffed by a total of seventeen (18) full-time, cross trained employees organized by specific duties.
The Water & Sewer Division has:
Three (3) equipment operators, six (6) water & sewer service personnel,
six (6) water & sewer workers, two (2) water & sewer pump station and treatment operators, one(1) SCADA and Controls Technician, assigned to the operation, maintenance and repair of the drinking water distribution system and the sanitary and combined sewer systems. All operations staff assigned to the operation and maintenance of the sanitary and combined sewer systems are supervised by a Water and Sewer Foreman, Operations Manager, Electrical Superintendent and Water & Sewer Superintendent.

The storm water collection system is maintained and operated by the City of Lewiston, Public Works Highway Division staff.

Project engineers and engineering technicians from the Engineering Division are assigned projects related to the rehabilitation, replacement, and improvement of the sanitary and combined sewer systems. All engineering staff working on the maintenance of the sanitary and storm sewer systems are supervised by the City Engineer.

EMERGENCY REPSONSE PROCEEDURES

Effective emergency management planning requires considerable coordination and forethought. There are various types of emergencies and/or disasters that can have a very negative impact on the operation of the sanitary sewer system. When a dry weather sanitary sewer back-up occurs the sewer cleaning equipment is used to clean the blocked sewer. If that effort is unsuccessful, the internal closed circuit television equipment is used to inspect the line to determine the exact nature of the obstruction. If more aggressive cleaning or root removal won't solve the problem, emergency

underground utility locates are requested and the area is excavated to make the necessary repair.
When wet weather combined sewer overflows or basement back-up occur the Sewer operations staff check downstream collector and interceptor sewers to see if they are surcharged. If the downstream collector and interceptor sewers are surcharged, the line with the sanitary sewer overflow or basement back-up will be flagged for an internal televised pipe inspection to attempt to identify infiltration and inflow sources. The tributary area may also be targeted for smoke, sump pump inspections, and dye water flood testing to determine infiltration and inflow sources if not already known.

EQUIPMENT AND MAINTENANCE FACILITIES

Adequate maintenance of the sanitary sewer system relies on the availability of equipment and parts. Maintenance facilities are locations where equipment, materials and personnel are dispatched and where operations records are kept. Industry guidance recognizes that properly planned and supported equipment facilities are essential to collection system operation.

1. Equipment
The City has the following equipment assigned to the operation and maintenance of the sanitary and combined sewer systems:
- One Tandem Vactor Truck
- One Aries Sewer Televising trailer with tracked tractor and skid mount system.
- One Tracked Excavator
- One Loader Back Hoe
- Two Dump Trucks
- Three Service Trucks with Tools
- One Service Trucks with Crane and Tools

2. Public Works Municipal Garage Facilities
The Municipal Garage provides for the maintenance of and coordination for replacement of the City's sewer system maintenance equipment. The Municipal Garage performs the following specific functions for the City's sewer system maintenance equipment:
- Perform preventive maintenance and repairs at proper intervals.
- Evaluate, rehabilitate and modify equipment to include minor accident damage.
- Oversee outside fueling services.
- Administer a repair record system.
- Evaluate equipment replacement and administer bidding process for purchasing new equipment.
- Train City personnel on proper operation of new equipment.

The Municipal Garage is headed by the Fleet Manager and is staffed by nine full time certified mechanics. It has its maintenance facilities located at Department of Public Works Building. The Municipal Garage performs maintenance and repairs on all the sewer system maintenance equipment with the exception of the sewer

video inspection camera. The Municipal Garage uses computerized fleet software to track all maintenance activities pertaining to the sewer system maintenance equipment that they service. The Sewer Division staff performs some limited maintenance and repairs on the sewer video inspection camera with any additional maintenance or repairs being performed by Aries Industries, Inc.

MAINTENANCE OF COLLECTION SYSTEM MAP

One of the most typical problems in O&M Plan is determining the locations of sewer pipes and manholes. Determining such locations is best done by keeping appropriate collection system maps up-to-date. Maps and plans should be kept current by updating them when alterations or system additions occur. Accurate sewer mapping is a fundamental requirement for any Sewer Utility. This mapping allows staff to do a variety of activities including:

1) answer questions from current and potential customers
2) visually establish system performance trends
3) track maintenance and rehabilitation activities

The Engineering Division started work on a Geographical Information System (GIS) for the sanitary sewer systems in 1999. GIS is a collection of computer hardware, software, and geographic data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. With a GIS, it is possible link information (attributes) to location data, such as sewer complaints to addresses, maintenance records to sewer pipes or manholes within a system. Then it is possible to layer that information to provide a better understanding of how it all works together. All of the City's sanitary sewer manholes were located using aerial photography or a handheld global positioning system (GPS) unit to provide a +/-3-ft accuracy for the GIS. The sanitary sewer system GIS mapping is located on the City's network computer server. Paper copies are also available in the Foreman's office and used by the Operations Division Staff assigned to sewer system maintenance. The GIS Coordinator and the GIS Technician in the Engineering Division are the only two persons allowed to make edits to the sanitary sewer GIS mapping. The existing paper maps in the office of the Operations Division are annotated with corrections as discrepancies are discovered. The GIS Coordinator and the GIS Technician then edits the GIS mapping based on the annotated paper maps. The GIS Coordinator and the GIS Technician is also responsible to adding new sewer construction from City infrastructure or development related activities to the GIS mapping system. GIS mapping revisions are performed on a continuous basis as soon as the data is available for inclusion in the GIS system.

USE OF TIMELY AND RELEVANT INFORMATION

Timely and relevant information plays a critical role in an effective O&M plan. A dynamic O&M plan focuses on planning, implementing, reviewing, evaluating and taking appropriate actions in response to available information. The key to these approaches is the ability to get information from staff in the field to supervisors and engineering staff. The Public Works Department has several programs and processes in place to ensure the use of timely, relevant information. These include:

1. Computerized Sewer Televising Data Management System
The Public Works Department has implemented the IT Pipes software suite that integrates ESRI GIS with CCTV Inspection to manage all sewer televising data collected by the Sewer Division operations staff and outside sewer inspection contractors.
The GIS Coordinator imports the CCTV inspections data into the IT Pipes and GIS module and updates the GIS. That data is then available to Sewer operations Supervisors and Engineering Division staff to evaluate and determine if additional maintenance and rehabilitation activities are required for a sanitary sewer pipe. The Supervisors and Engineering Staff also have access to previous inspections for a pipe segment recorded using the IT Pipes software. The sewer televising data can be exported for incorporation in City sewer lining and repair project documents.

2. Sewer Lining and Repair Databases
The Engineering Division developed and maintains a GIS database of all sanitary sewer pipes that have been rehabilitated using the cured-in-place pipe lining technology. The sewer lining database is available on the City network computer system to all City Staff. Sewer Division operations staff utilize the database to identify sewer pipes that have the cured-in-place liner installed and adjust their maintenance activities accordingly for those pipes. The Engineering Division uses the sewer lining database as a planning tool to identify sanitary sewer pipes for future lining projects.

The Engineering Division developed and maintains a GIS database of all sanitary sewer pipes that have been repaired or replaced. The sewer repair database is available on the City network computer system to all Public Works Staff. Sewer Division operations staff utilize the database to identify sewer pipes that have had pipe repairs and adjust their maintenance activities accordingly. Sanitary sewer pipes with a multiple repairs can be identified and prioritized for future sewer lining and replacement projects. The sewer repair database can also be compared to the drainage and back-up complaint database to identify problematic lines.

3. Sanitary Back-Up and Compliant Databases
The Customer Service Division developed and maintains a database of all back-ups, overflows, and other complaints related to the combined and sanitary sewer system. The back-up and complaint database is available on the City network computer system to all Public Works Staff. The Engineer Division staff can utilize the back-up and complaint database to evaluate the effectiveness of the O&M plan and identify problematic areas for future sewer repair and rehabilitation projects.
The Public Works Department has also developed a complaint logging procedure to ensure all complaints received regarding the combined and sanitary sewer system are logged, receive an appropriate and timely response from the Public Works Stockroom/Dispatch staff, and are entered into the back-up and complaint database.

4. Engineering and Operation Division Communications

The Engineering and Operations Divisions Staffs work closely together to identify, prioritize, and remediate any sanitary sewer problems with the City's combined and sanitary sewer collection system.

ROUTINE PREVENTATIVE O&M ACTIVITIES

A good preventive maintenance program is one of the best ways to keep a system in good working order and prevent service interruptions and system failures which can result in overflows and/or backups. In addition to preventing service interruptions and system failures, a preventive maintenance program can protect the capital investment in the collection system. The primary goal is to develop a plan to help insure optimal operation of the utility. The Lewiston Sewer Division's Preventive maintenance activities include:

1. Routinely clean the collection system and address defects or other problems
Sewer Division operations staff have averaged approximately 52,800 lineal feet of sanitary sewer cleaning annually from 2010 to 2014. The 52,800 feet of annual sewer cleaning represents 7% of the sanitary sewer system on an annual basis so the entire system would be cleaned over a 15 year period. In this manner the utility is constantly maintaining the operations of the sewer lines and targeting appropriate corrective action for problems identified by initiating video inspection efforts. Internal pipe televising efforts are prioritized for sewer lines using the following criteria from highest to lowest:

a.) Lines where a back-up, blockage, complaint, or sanitary sewer overflow has occurred.
b.) Problematic sewer lines identified during systematic sewer cleaning activities.
c.) Sewer lines in areas where the City is reconstructing, patching, or resurfacing streets or alleys.
d.) Sewer lines identified for rehabilitation or replacement in the City's Capital Improvement Plan.
e.) Systematic sewer televising efforts.

The Sewer Division operations staff that operates the sewer video inspection cameras have been trained and certified to use the Pipeline Assessment and Certification Program (PACP) developed by the National Association of Sewer Service Companies (NASSCO) for internal pipeline televising inspections. PACP coding was developed to provide standardization and consistency in the way the sewer pipe conditions are evaluated. The goal of PACP is to create a comprehensive and reliable reservoir of data to describe the sewer pipe that can be used in the prioritization, planning, and renovation of wastewater collection systems. The PACP system yields a numeric score of each sewer line televised that can be utilized to prioritize the sanitary sewer utility's rehabilitation, repair, and replacement efforts. Internal sewer televising data is collected using the IT Pipes software. The data is linked to the sanitary sewer system GIS map and stored on the City's network server for access by Operations and Engineering Staff. Internal sewer televising data can be viewed by simply clicking a pipe segment on the GIS sewer map in the IT Pipes program. The user can view all internal pipe television

inspection done for a particular segment captured using the IT Pipes software. Data contained in the IT Pipes software included the digital video of the inspection, inspection code data, pipe attribute data (diameter, material, and shape), and location utilizing the sanitary sewer GIS map.

The Engineering Division has contracted out a comprehensive video inspection program that incorporates sanitary sewer manhole inspections. The plan is to continue manhole inspections on an annual basis until all 3,009 sanitary and combined sewer manholes have been inspected. Once inspected and evaluated the manholes will be re-inspected on a frequency based on their condition (some may be annual inspection while some may be every 5 years). In this manner the utility is constantly monitoring the condition of the manholes and targeting appropriate corrective action for problems identified by the inspection efforts.
The Engineering Division reviews all the internal pipe televising and manhole inspection data to identify and prioritize sewer lines and manholes for repair, rehabilitation or replacement. The Engineering Division manages annual sewer rehabilitation and cured-inplace sewer lining projects to address defects and other issues identified.

2. Investigates complaints and promptly corrects faulty conditions.

The Public Works Department, Water and Sewer Division staff responds to all calls concerning the sanitary sewer system. The City has established the following procedure for documenting and responding to calls from customers regarding the sanitary sewer system:

f.) Calls are received by Public Works Customers Service Staff during business hours or the Lewiston Auburn Communication Center (COMM Center) during non-business hours.
g.) During the call Public Works Customers Service Staff log into a computer database the complaint location, contact information, and a brief description of problem. Information is saved electronically on the City's computer network system.
h.) The Public Works Customers or Comm Center Staff contacts Sewer Division operations staff to respond to the complaint by radio during normal hours of operations. They contact emergency the Water & Sewer Standby Person for calls received during non-business hours.
i.) Sewer Division operations staff responds to the complaint and reports a description of what they observed and what response they made to the problem on their work order form.
j.) The work order form data is entered into the Customer Service database for tracking and further analysis by the Water & Sewer Supervisors and Engineering Division.

The Engineering Division uses the complaint data to identify and prioritize sewer lines and manholes for repair, rehabilitation or replacement. The Engineering Division

manages an annual sewer point repair and cured-in-place sewer lining contract to address defects and other issues identified.

3.) Maintain and update a schedule of planned activities.
The Public Works Department utilizes a Capital Improvement Plan (CIP) for prioritizing, scheduling, and funding all major infrastructure projects including sanitary sewer improvements. The CIP is updated annually and is available on-line on the City website The CIP is based on current conditions, policies, programs, priorities, fund balances, revenue projections, general cost estimates, and staff availability. A change in one or more of these factors may alter the projections. Some projects may also be programmed based on Council directives, development agreements, or other special considerations. The Engineering Division reviews all the internal pipe televising, manhole inspection, and complaint data to identify and prioritize sewer lines and manholes for repair, rehabilitation or replacement for inclusion in the CIP.

Internal pipe televising and manhole inspection efforts are prioritized using the following criteria from highest to lowest:

a.) Sewers where a back-up, blockage, complaint, or sanitary sewer overflow has occurred.
b.) Problematic sewer lines identified during systematic sewer cleaning activities.
c.) Sewer lines and manholes in areas where the City is reconstructing, patching, or resurfacing streets or alleys.
d.) Sewer lines or manholes identified for rehabilitation or replacement in the City's Capital Improvement Plan.
e.) Systematic sewer cleaning efforts. Sanitary sewer lines are cleaned on a systematic basis using GIS data and generally working from the outer collection sewers toward the treatment plant. More frequent maintenance cleaning is routinely performed on reaches of sewer identified to have problems associated with excessive root intrusion, grease or solids buildup.

4.) Preventive maintenance activities
The Public Works Department accomplishes the following preventative maintenance activities for the combined and sanitary sewer collection system:

a.) Planned, systematic, and scheduled inspections to determine current conditions and plan for maintenance and repairs:

Exposed sewers conveying sanitary or combined flows will be inspected annually for deterioration or risk of failure (see attached list of exposed sewers)

b.) Planned, systematic, and scheduled cleaning and repairs of the system based on past history:

Sanitary sewer lines are cleaned on a systematic basis according to GIS data and generally working from the outer collection sewers toward the treatment plant. A sewer cleaning schedule and log is maintained for sewers that require monthly, quarterly or annual cleaning.

The sewer lines are hydro-jetted to remove debris, grease, and roots from the pipes using the Public Works Sewer Division Vactor sewer cleaning trucks. Debris, roots or grease is vacuumed from the manhole and disposed of in accordance with state and federal regulations at the sewer treatment plant (LAWPCA) or in an approved landfill facility.

Root blockages identified during cleaning or televising activities are mechanically removed using a hydraulic root cutter attachments to the hydro-jetting equipment. The City does not chemically treat root growth in its sanitary sewer lines.

Grease blockages identified during cleaning or televising activities are removed using a degreasing agent and the hydro-jetting equipment. More frequent maintenance cleaning is routinely performed on reaches of sewer identified to have problems associated with excessive root intrusion or grease buildup.

Sewer Division operations staff have averaged approximately 52,800 lineal feet of sewer pipe cleaning annually from 2010 to 2014. The 51,800 feet of annual pipe cleaning represents 7% of the sanitary sewer system on an annual basis so the entire system would be cleaned over a 15 year period. The City is presently on a 15 to 17 year systematic cleaning frequency for its sanitary and combined sewer system.

The Engineering Division reviews all the internal pipe televising, complaint, and manhole inspection data to identify and prioritize sewer lines and manholes for repair, rehabilitation or replacement. The Engineering Division manages an annual sewer cured-in-place sewer lining contract to address defects and other issues identified by priority.

c.) Regular repair of deteriorating sewer lines.
The Engineering Division manages an annual sewer cured-inplace sewer lining contract to address defects and other issues identified by priority.

Lewiston – Auburn Water Pollution Control Authority

Wet Weather Management Plan

And

High Flow Operations and Bypassing Guide

Revised: December 2013 TBP

General Note: In any instance where an action is attributed to the Lead Operator, the meaning shall be that the Lead Operator or an employee under the direction of the Lead Operator will take the appropriate action. When consultation with the Assistant Superintendent or is specified, the meaning shall not be exclusive, that is others may also be consulted such as the Plant Supervisor, Pretreatment Coordinator, etc. When operational changes are to be made, the decision is to be made by the Lead Operator and the responsibility shall be the Lead Operator's unless specific instructions have been given by a more senior employee.

Mission and Purpose: It is the mission of the Lewiston – Auburn Water Pollution Control Authority to provide the highest level of treatment possible (within operating constraints) to the wastewater discharged to the treatment plant. It is important, therefore, to treat the maximum flow possible at the treatment plant at any point in time including periods of rain and snow melt.

In order to carry out this mission, it is therefore critical that Authority personnel utilize all tools available to maximize the flow through the entire treatment facilities. In so doing particular care and attention must be paid to the behavior of the secondary system biomass in order to maintain a good settling biomass at all times. This is necessary so that the system will be able to tolerate increased flows from unpredictable precipitation events or snow melt without a washout of secondary solids or a need to prematurely bypass flow around the secondary system or to throttle flows at structure B. In addition, the secondary bypass/blend flow system is only to be utilized after all other reasonable measures have been taken to maximize flow through the secondary system.

Definition of High Flows: For the purposes of this Plan, high flows are to be considered any flows from any source, including precipitation and snow melt, which are in excess of normal "dry weather flows". Average daily flows (computed from annual data sets) for the last five years have ranged from 10.3 to 13.9 mgd. While these figures include both dry and wet weather periods the data also varies on a diurnal basis (up and down throughout any given day). Therefore, for the sake of simplicity and because the original plant design average flow is 14.2 million gallons per day, any instantaneous flow in excess of 14.2 mgd will be considered "high flow" for the purposes of this plan.

MEPDES Flow Requirements: The Authority's current Maine Pollutant Discharge Elimination System Permit contains specific requirements concerning the treatment of high flows. Among these is the following "The secondary bypass shall not be initiated at an instantaneous flow less than 17,361 gallons per minute (25 mgd) and **at no time** shall flow be bypassed around the secondary system at less than 22 mgd or at flow as specified in the permittee's annual revised Wet Weather Management Plan [this document] and approved by the Department which may be different than the 25 mgd and/or 22 mgd." In addition, significant restrictions on the use of the CSO (structure B) have also been included in the MEPDES permit as follows:

a) The discharge of dry weather flows is prohibited. All such discharges shall be reported to the Department in accordance with Standard Condition D (1) of the Permit.

b) No discharge shall occur as a result of mechanical failure, improper design or inadequate operation or maintenance.

c) No discharge shall occur at flow rates below the maximum design capacity of the wastewater treatment facility, pumping stations, or sewerage system. The pump station was designed for two influent pumps with a combined capacity of 32 mgd with a third pump on stand by. Paragraph C of the 'Order' *of the Administrative Consent Agreement and Enforcement Order* issued by the Department on March 21, 2002, specifies that the present influent pumps shall be replaced or refurbished to provide at least the original facility design capacity of 32 mgd with only two pumps in operation.

LAWPCA is authorized to discharge combined sanitary and storm related water through the CSO, in excess what the facility can treat through secondary and primary treatment without violating permit limits for bypass conditions, but must treat an instantaneous minimum of 25 mgd through secondary and a minimum of 32 mgd through secondary and primary before activating the CSO. In Situations where LAWPCA can treat greater than an instantaneous minimum of 25 mgd through secondary and/or more than 32 mgd through secondary and primary without violating license limits for bypass conditions, LAWPCA shall do so before activating the CSO."

To put these requirements in other words, the Authority must treat all flow to the highest level possible at all times, but in every case 25 mgd needs to go through secondary treatment before the secondary bypass kicks in and once flow falls to 22 mgd the secondary bypass needs to kick out. In addition, an additional flow of 7 to 10 mgd needs to be treated through the primary system (on top of the flow treated through primary and secondary) before the CSO (structure B) is activated at 32 mgd or higher.

SCADA Control and Not Staffed Operation: The Authority currently has a supervisory control and data acquisition system (SCADA) which is capable of operating the treatment works under most scenarios without the need for personnel to be physically at the treatment plant. Systems capabilities include the ability to set flow rates and levels at which various gates and bypass structures are activated. The Operator filling the on call is considered to be the Lead Operator for the time he or she is filling the on call time. It is the responsibility of the Lead Operator (Operator filling the on call time) to determine if and when it is necessary to come into the treatment facility in person in order to assess conditions on site and to call in additional personnel as needed. Upon finishing a shift for any day, it is the responsibility of the Lead Operator after consultation with the Assistant Superintendent, when available, to set the levels at which the "secondary bypass" and the Lewiston CSO– NPDES outfall 002 "structure B" will initiate operation. Settings are to be based upon the principles enunciated below, but shall not be set lower than 32 mgd for the CSO structure B, and not lower than 25 mgd to initiate secondary bypass without the approval of the Superintendent, Assistant Superintendent or Plant Supervisor.

The Following systems are to be monitored before, during and after high flow events in order to achieve the mission and purpose of this Wet Weather Management Plan.

Preliminary Treatment: Prior to the raw sewage pumps the Authority measures and samples the wastewater from Lewiston and Auburn separately and then provides screening with two mechanically cleaned bar screens having ¾ inch bar spacing. The parshall flumes require little or no maintenance and do not require special attention during high flow events except that the lead operator needs to be sure that flow does not back up to the degree that the flumes become flooded. A flooding condition is most likely to be caused by either a lack of raw sewage pumping capacity (see below) or a blockage of the bar screens. Occasionally, during periods of high flow, especially after prolonged periods without high flows, debris and other materials can be washed into the plant which can cause the screens to plug or to cause the rake mechanism to fail to clean the bars. Concerning the collection of influent samples, it is important that the operators pay close attention to the automatic samplers and keep the sample heads and lines free of materials that can cause the lines to be plugged and fail to take samples as needed for both regulatory compliance and for apportioning costs between the Cities of Lewiston and Auburn.

Actions to be taken before high flows: Check the operation of the bar screens to ensure that the rake mechanisms are working properly and that after a rake makes a pass through the bar rack that there is not an unusual difference in the water level in front of the bar screen and behind the bar screen (which would indicate the start of a blockage in the screen). Bar screen mode of operation is normally timer/differential level mode, however, becomes continuous run mode with the screens running in a staggered mode (that is when one rake is down in the channel, the other rake should be near the top of its travel) once flows hit a predetermined flow set point on SCADA. This set point is particularly important in the autumn when leaves and branches tend to accumulate in the storm water portion of the combined collection system.

Actions to be taken during high flows: Monitor the operation of the influent samplers to be sure samples are being taken and that sample heads are not plugged. Verify periodically that the bar screens are functioning properly without a backup of flow.

The bar screens may plug with debris – most likely to occur in the case of a rapid increase in flow following a period of dry weather flow – the water level on the upstream side of the bar rack can reach a level that will keep the rake mechanism from cleaning the rack. Should this occur, the lead operator is to take immediate action to clear the obstruction and resume continuous operation of the motor and rake mechanisms. Two methods are possible: 1) Shut off the flow to one of the two bar screen channels using the shut off gate immediately upstream of the bar screen, allowing all flow to continue to flow through the remaining bar screen albeit at a increased water height. This should allow the water in the bar screen without flow to drop over a short time period to a point at which the screen can be cleaned by the motor and rake mechanism. Once the bar screen is cleaned, open the upstream gate and, if necessary, shut off the flow to the other bar screen using the gate upstream of that bar rack. Clean the second bar rack as necessary until the rake and motor mechanism can be operated and resume normal operation. 2) If the screens are plugged to a height that would make procedure number 1 impractical or in the judgment of the lead operator the number 1 procedure is not likely to be able to be accomplished in a reasonable time frame due to the specific circumstances encountered, then shut off all flow into the plant utilizing the gates immediately upstream of the parshall flumes. Clean the bar screens as quickly as possible utilizing hand raking and the motor operated rake arms, if possible. Resume treatment of all flow or a minimum of 32 mgd as soon as possible. *Note: use of this method will result in an exceedence of the Authority's MEPDES permit for bypassing flow at less than 32 mgd and must be reported to the Maine DEP within 24 hours.*

Actions to be taken after high flows : Ensure both screens return to timed/differential level operation once the set point has been reached.

Raw Sewage Pumps: The Treatment Plant has three raw sewage pumps, two of which are to be capable of efficient operation at all times. With properly adjusted wear rings and rigorous maintenance, two pumps should be capable of pumping 32 mgd. In all cases, the Authority will endeavor to keep three pumps operable and ready for service especially during periods when high flows are most likely (e.g. spring snowmelt and autumn rains).

Actions to be taken before high flows: Check to make sure that all pumps are available and that the pump sequence is set so that the maximum flow can be delivered by the pumps available. (Note: significant planned pump maintenance including replacement of wear rings and repair or replacement of impellers is to be done during periods of the year that generally exhibit little precipitation or snow melt that would contribute to high flows)

Actions to be taken during high flows: Early in the high flow event make sure that all three pumps are operating effectively and no pump is "stuck" at a lower speed. Throughout the high flow event check periodically that no pump is exhibiting excessive vibration, high temperature, or other abnormality.

Actions to be taken after high flows: Once flows recede, return pumps to a lead, lag, standby sequence which will maximize flow with the least energy used. Verify that the pumps are pacing properly with flow (e.g. that the lead pump is reaching its maximum speed before calling for the second pump to come on)

Aerated Grit Chambers: The aerated grit chambers (tanks) remove grit by inducing a rolling or "spiral" flow to the wastewater that causes the heavier, inorganic particles (sand and grit) to fall out of the wastewater while the lighter, organic particles remain in suspension and are carried into the rest of the treatment process. This spiral flow is induced in two ways. First, the inlet flow is directed into the tank in a manner which promotes this rolling flow pattern. Second, air can be added from variable frequency driven blowers to one side of each chamber so that the velocity of the spiral is increased. Due to the increased velocity of the wastewater through the tanks at higher flows, it is generally recommended that lower air rates be used with higher flows. Each of the Authority's aerated grit chambers is capable of handling flows up to 38 mgd. Therefore the grit chambers should not limit the amount of flow that can be treated during a high flow event.

Actions to be taken before high flows: When necessary, (when the operator is not sure that there is adequate storage room for grit) work with the maintenance crew to check the level of grit in each chamber by turning off the air flow to each chamber and probing the grit level with the clamshell bucket and/or a long pole. Remove grit as necessary. Normally, grit removal is to be scheduled during periods when flows are low. (Note: it is especially important to remove grit from the aerated grit chambers prior to the beginning of snow melt due to the potential for receiving heavy grit loads from street sanding and inclement weather during this period which could make grit removal difficult.)

Actions to be taken during high flows: Check flow pattern and chamber effluent as needed in order to adjust air flow rates so that excessive levels of grit are not carried out of the grit chamber and into the primary basins. At Flows in excess of 18 mgd, it is likely that no air is needed in order to maintain good capture of grit therefore SCADA interlocks shut these blowers off until a restart flow set point is reached.

Actions to be taken after high flows: Ensure grit blower's return to operation once the restart flow set point has been reached and check that air flow to the grit chambers is at pre high flow levels to keep organic solids from settling out in the grit chambers.

Primary Sedimentation Basins: The Authority's two primary clarifiers are 7 and ½ feet deep 38 feet wide and 192 feet in length and are served by chain and flight collectors for sludge removal and grease and scum removal. Although baffles were installed in 1997, the clarifiers still suffer from poor removal at high flow rates when influent TSS

concentrations are very low (less than 200 mg/L) and may be prone to re-suspending solids when flows exceed 24 mgd. At approximately 33 mgd, and depending on wind conditions, the slotted grease and scum removal pipes at the effluent end of the basins are prone to flooding and 33 million gallons has been cited as the maximum or peak capacity of the primary sedimentation basins.

Actions to be taken before high flows: Check the chain and flight collectors on both basins to ensure that both are running smoothly. Remove grease and scum from the effluent end of the basins using the rotating slotted pipes.

Actions to be taken during high flows: Continue to monitor chain and flight operation, check grease removal mechanism to be sure that water levels are not above the maximum water level for these mechanisms. Check the primary effluent (using imhoff cone or other visual or quick analytical means) to determine if solids are being scoured off of the bottom of the basins.

Actions to be taken after high flows: No specific actions need be taken for this unit process.

Activated Sludge System (Aeration Basins and Final Clarifiers): The activated sludge system provides the greatest portion of BOD_5 and TSS removal in the Authority's treatment process. The efficacy of this treatment is, however, dependent on maintaining a good settling sludge. During periods when the sludge volume index (SVI) is below 150 and the clarifier blankets are maintained below two feet, the peak capacity of the activated sludge system has been demonstrated to be as high as 32 mgd. Although a minor deterioration of effluent quality is to be expected during high flows, it is critical that the plant biomass not be allowed to "wash out" so that future waste loads can be assimilated and treated by the biological solids retained in the activated sludge system and permit compliance can be maintained.

Actions to be taken before high flows: Perform regular microscopic examination, settleability tests, and clarifier blanket measurements, check functioning of the clarifier draft tubes, aeration basin D.O. measurements and monitor return activated sludge (RAS) pumping rates to ensure that a healthy, good settling sludge is maintained. Through the use of nutrient addition, aeration control (including D.O. control for nitrification and denitrification), chlorine addition to the RAS, and proper sludge wasting rates, maintain the sludge settleability to an SVI below 150 . Maintain clarifier sludge blankets to less than two feet. Ensure that all active clarifier draft tubes are working (are not clogged).

Actions to be taken during high flows: Check RAS pumping rates (the "normal" Auto set point for return rates is 27% of the influent flow). In general, rates may be increased if the clarifier blankets are thick and are increasing, rates may be decreased if the blanket is diffuse (not compacting) or the operator determines that additional solids storage in the clarifier may be tolerated for a short term (less than 24 hour) high flow event. Monitor clarifier blanket levels and visually check for solids loss over the clarifier weir. In the

event of solids loss, the primary reason for the loss of solids should be determined. One of three basic causative factors is most likely to be primarily responsible as follows:

- Light poor settling sludge. If the cause is "ashing" likely due to lysid, old cells or fragments of cells remaining after RAS chlorination, addition of polymer to the aeration basin effluent is likely to improve performance. This remedy, however, is likely to take 24 or more hours to be effective, and is thus only suitable for sustained high flow events.
- Slow settling sludge that does not form strong floc. This may be due to filamentous organisms or possibly polysaccharide forming organisms. In the case of filamentous organisms, the addition of polymer to the aeration basin effluent is likely to improve performance, but will not help in the case of polysaccharides. "Jar testing" of mixed liquor sample with a very small addition of polymer should be used to verify that the addition of polymer will improve settling. Polymer addition is done via BFP polymer pump #1 to the aeration basin effluent launders. Pump speed should start at 30% and not be changed more than 5% per day if required. Polymer make-up water must be valved for city water during this operation.

  Microscopic examination of the mixed liquor is critical to determining the cause of the poor settling. Increased wasting of mixed liquor is the preferred method of polysaccharide removal once the cause of them is corrected. If RAS chlorination is used, a starting dosage rate of 1 GPD Hypo/ 1000 lbs of MLSS is recommended.
- Hydraulic washout of pre-existing blankets is occurring. In this case, a short increasing of the return activated sludge pumping rate followed by reducing the pumping rate to as low as practical may help transfer solids to the stabilization zones of the aeration basins. Adjustments to and possibly shutting off air to the contact and stabilization zones can be done in order to allow MLSS to settle out in the aeration basins. This method should only be used for periods < 8 hours. An immediate step to be taken during a washout is to shut the influent gates to the affected system and then shut off the respective RAS pump. Additional influent gates to the system remaining online may need to be opened to accommodate the additional flow. Once the washout is under control, operators may open the influent gate and turn the RAS pump back on to match the influent flow rate to the required RAS rate.

Note that while return activated sludge chlorination, increased nutrient addition, increased solids wasting can all be used as long term strategies to help control sludge blankets and thereby effluent solids losses, none of these methods is sufficiently rapid to be relied up once a high flow event has begun.

Actions to be taken after high flows: Resume aeration to the pre high flow condition and continue to monitor blanket levels. If more than 1/3 of the biomass in either system is being carried in the clarifiers, take steps to transfer solids to the aeration basin by increasing the RAS pumping rate. Check nutrient addition levels to assure that low

nutrient filaments and/or polysaccharide organisms are not being favored. Maintain dissolved oxygen levels in the aerated portions of the aeration basins above 1.0 mg/L.

Secondary System Bypass (Blend Flow): The secondary bypass is to be used only after all other measures have been employed to maximize the flow of wastewater through the secondary system short of actions which would harm the ability of the facility to treat future waste water flow and loads. The secondary bypass system may, however, be used to reduce "washout" of secondary solids from the secondary clarifiers. (note: this use is justified under General Condition 11 of our waste discharge license only as necessary "where storm drainage would damage the facility" the biomass being considered a part of the facility) In all cases, the lead operator is to take blanket measurements, monitor the character of the secondary clarifier effluent, and make a determination of what flow rate is the maximum that can be treated through the secondary system without significant loss of solids from the sludge blanket. Upon making this determination, the lead operator will set the flow rate that will initiate a secondary bypass. (Note: solids present in the clarifier effluent as a result of "pin floc", "ashing" or break up of filaments due to chlorination of the return activated sludge are not reasons to reduce flow through the secondary system).

Actions to be taken before high flows: In addition to the actions listed under the Activated Sludge System, the Lead Operator is to establish what level of flow can be successfully treated through the activated sludge system and set the blend flow system to initiate bypass of the secondary system at an appropriate level.

The control gate and shut off gate both need to be place in "remote" at the units and both place in "auto" at SCADA. "Start bypass" should be set to 27 MGD at SCADA and "Stop bypass" should be set to 25 MGD at SCADA. These parameters can be adjusted based on conditions of the secondary system but are good starting points to ensure a minimum of 25 MGD is receiving secondary treatment.

Actions to be taken during high flows: Monitor the functioning of the blend flow system to verify that blend flow initiated at the proper flow rate. Adjustments to the flow at the secondary bypass will be made by adjusting the "Dist Box Level" set point at SCADA. This set point may need to be adjusted relative to the distribution box level readout. If additional flow can be treated through the activated sludge system, adjust the "Dist Box Level" setpoint appropriately. Continue to check on the quality of the primary effluent, secondary effluent and chlorine contact chamber effluent. Make any necessary adjustments to maximize treatment and to minimize pollutant release to the Androscoggin River.

Actions to be taken after high flows: Make sure that the blend flow system has shut off secondary bypass flow and that the system has again returned to a "ready" condition.

Lewiston *CSO* – MPDES Outfall 002 (Structure B): Structure B is normally activated and controlled based upon plant influent flow (Lewiston and Auburn) using the SCADA system. Structure B is to be used when the amount of flow entering the plant is more than can be treated through the headworks, raw sewage pumps or the primary

sedimentation basins. (See the above unit process descriptions). The flow set point which activates structure B should, in nearly all cases, be equal to or greater than the flow set point that activates the secondary bypass system so that during periods of high flow that can not receive full secondary treatment, a portion of the flow receives primary treatment and is blended back into the effluent prior to chlorination. The exception to this rule would be when one of the unit processes preceding the secondary system is not able to process at least 25 mgd. **The final determination of which bypasses to activate and to what degree, needs to be based upon the lead operator's judgment of what actions will be best for the Androscoggin River and according to the guidance found in the Authority's MEPDES permit (standard conditions page 4).** In part this guidance states that "Bypass is prohibited, and the Department may take enforcement action against a permitee for bypass unless: (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and (C) The permitee submitted notices as required under paragraph (c) of this section."
Sampling Issues: During high flow conditions it is important that the Lead Operator pay special attention to the sampling and analytical issues required in the Authority's MEPDES permit. During periods when the secondary bypass is active, sampling requirements at the chlorine contact chamber outfall "final sampling point", need special attention. Although the location where the samples are collected does not change, the sampling point during secondary bypass is referred to as outfall 001D during bypass (and 001C when no secondary is being bypassed). During a secondary bypass event, we are required to analyze the secondary bypass flow for total residual chlorine and E. Coli, during the "chlorination season" as defined in the Authority's MEPDES permit (currently May 15 through September 30).

Multiple intermittent overflow occurrences of the secondary bypass in one discharge day are considered as one overflow occurrence and should be sampled as such. Grab samples for E.Coli and total residual chlorine are the only two test required and only when Outfall #001D is active for a single continuous discharge event lasting less than 60 minutes or during intermittent discharge events over a course of a 24-hour period lasting less than 120 minutes, and also only if said event(s) occur between the hours of 7:00 AM- 4:00 PM during the normal work week (Monday through Friday, holidays excluded).

Other Measures: During periods when either the structure B *CSO* or the secondary bypass are active, any hauled waste including septage and holding tank wastes must be held in the septage receiving tank and not fed into the treatment train. A SCADA interlock will ensure this happens with the septic receiving pinch valve in "auto". If the Authority does not have capacity to store the wastes, then any hauled waste must be refused until such time as all flow from the sewers is receiving full secondary treatment.

Each incident is unique and must be treated using the employee's best professional judgment. Every effort will be made to maintain a healthy biomass that will allow the total treatment plant flow to be as high as possible. In every case, care is to be taken to maximize treatment in terms of flow and level of treatment, and readings and decisions are to be documented.